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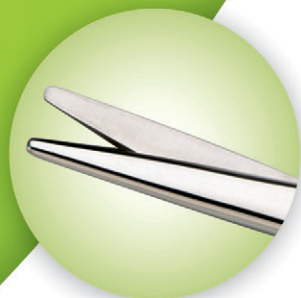
SURGICAL

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RENEE NEMITZ, CST, RN, AAS
Surgical Technology Program Instructor
Western Iowa Tech Community College



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SURGICAL INSTRUMENTATION: AN INTERACTIVE APPROACH,
SECOND EDITION

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Executive Content Strategist: Jennifer Janson
Senior Content Development Specialist: Kelly Brinkman
Publishing Services Manager: Julie Eddy
Senior Project Manager: Marquita Parker
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Evansville, Indiana

GINNY SCHIMANSKY, CST

Clinical Instructor
Surgical Technology
College of Health, Human and Public Services
Daytona State College
Daytona Beach, Florida

JACOB MUTH, CST

Instructor
Surgical Technology
Great Lakes Institute of Technology
Erie, Pennsylvania



Dedication

*To all my students—past, present, and future.
You are the reason for the inception, development, and
completion of this project.*



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The willingness of all to work with our team was invaluable in developing this educational resource.



Preface

Instrumentation is one of the most important aspects of a surgical procedure. Surgical instruments can be considered an extension of the surgeon's hands. When the surgical team knows the proper name, handling, and use of each instrument, it enhances the quality of the surgical procedure. As a learner this can be extremely overwhelming due to the multitude of instruments and their similarities. Learning instruments is much more than just recalling the name. The idea for this text came about after years of watching my students struggle with this. They could often recall the names, categories, and specialty area, but could rarely explain what it was or how it was used. I saw a pressing need for a product that had not only clear, detailed photos, but also addressed common uses, gave insights about instruments, and allowed for interaction. Whether you are a student, surgical technologist, first assistant, registered nurse, or physician's assistant who is working in surgery, in central service, or product sales, this instrumentation book with interactive exercises will help you, the learner, gain vital core knowledge about instrumentation.

The text is organized into 14 chapters, starting with the basic instruments. Chapter 1 is an overview of instrumentation, followed by Chapter 2, designed to introduce the learner to the fundamental instruments. These are the basic essential instruments that can be seen in any instrument set, regardless of specialty area. The text then moves through commonly used instruments in the 12 different surgical specialty areas. Keep in mind that instruments may vary according to facility, surgeon, and procedure. To conserve space, some instruments may be addressed in one specialty area and are used by other specialties, but these will not be repeated. Within each chapter, the instruments are grouped according to their category - accessory, clamping and occluding, cutting and dissecting, grasping and holding, probing and dilating, retracting and exposing, suctioning and aspirating, suturing and stapling, or viewing.

Each page contains one to two instrument monographs with a consistent presentation of each, including:

- **Large, clear, full photo with detail.**
- **Name:** states proper instrument name.
- **Other name:** states alternate name or names that the instrument may be called.
- **Description:** briefly describes instrument characteristics.
- **Use(s):** lists common uses and/or areas of use.
- **Instrument insight:** explains key information about the instrument.
- **Caution:** expounds on some of the dangers that can happen when handling instruments.

Enhanced Evolve resources include the invaluable interactive component of this product. Access to the Evolve site requires a pin code (found in the inside front cover). Once registered, the interactive activities will give you the ability to interact with the instruments, taking your knowledge to the next level. No other product on the market offers this type of interaction. Included are:

- **Digital image library:** includes all of the photos from the book with the ability to zoom in and out, and rotating views of more than 100 instruments.
- **Audio pronunciation:** allows the learner to click on the audio icon and hear the proper name for each instrument.
- **Drop-and-drag exercise:** allows the learner to place instruments onto a Mayo tray from select procedures.
- **Timed audio identification exercises:** challenges the learner to identify the instrument in 5 seconds or less. The instrument is asked for, and the learner has to choose the correct instrument from a set of images.
- **Flash card exercises:** the learner clicks the card image, and it "flips" to reveal its name, category, and discipline.
- **Small fragment fixation set:** allows the learner to explore a small fragment set. This exercise lets the user open the set and investigate each tray. The learner can view animation of the tray being opened; roll over any item in the

instrument, screw, or plate trays; and click on it to view a close-up image and the name.

- **Large fragment fixation set:** allows the learner to explore a large fragment set. This exercise lets the user open each pan and investigate it; roll over any item in the instrument, screw, or plate pan; and click on it to view a close-up image and the name.
- **Other exercises:** allows the learner to fire a skin stapler; assemble the McIvor mouth gag

and the bone cement system; and load a screwdriver, scalpel and clip, Stryker System 6 power, and TSP power (saws, drills, and reamers) and more.

To assist educators with course materials, all images are downloadable for use in lectures, handouts, and exams. With the high-quality photographs and interactive exercises, your institution will not have to budget thousands of dollars for instrument sets used for demonstration only.



Contents

- 1 Introduction to Surgical Instruments, 1**
- 2 Basic Instruments, 6**
- 3 General Instruments, 35**
- 4 Laparoscopic Instruments, 48**
- 5 Robotic Instruments, 74**
- 6 Obstetrics and Gynecologic Instruments, 81**
- 7 Genitourinary Instruments, 101**
- 8 Ophthalmic Instruments, 119**
- 9 Otorhinolaryngology Instruments, 139**
- 10 Oral Instruments, 185**
- 11 Plastic and Reconstructive Instruments, 197**
- 12 Orthopedic Instruments, 210**
- 13 Neurosurgical Instruments, 257**
- 14 Cardiovascular Thoracic Instruments, 291**

Introduction to Surgical Instruments

HISTORY

A surgical instrument is a specially designed device or apparatus used to carry out a specified task during a surgical procedure. Surgical instruments date back to prehistoric times when our early ancestors sharpened stones, flints, and animal teeth to perform surgery. Throughout history, surgical instruments have been created from a variety of materials, such as ivory, wood, bronze, iron, and silver. The discovery of anesthesia and asepsis in the eighteenth century and the development of stainless steel in the nineteenth century started the modern evolution of surgical instrumentation. The twentieth century brought many changes with the development of electrocautery, ultrasonic, and endoscopic devices. New materials, such as titanium, Vitallium, vanadium, carbides, and polymers, are being used in the manufacturing process of instruments. The twenty-first century has already seen advances in remote tele-surgery, robotics, and image-guided systems, which have changed the way surgery is performed and how instruments are developed. The next generation of surgical systems and new materials will revolutionize the way surgical instruments are designed and created.

The vast majority of surgical instruments, however, are still manufactured from stainless steel. Stainless steel is a combination of carbon, chromium, iron, and other metals (alloys). This combination makes the instruments strong and resistant to wear and corrosion. During fabrication, one of three types of finishes is used on stainless steel instruments. The mirror finish is highly polished and reflects light. This causes a glare, but the instrument is highly resistant to corrosion. Satin or matte is a dull finish that reduces glare and is the preferred finish. Ebony is a black chromium finish that completely eliminates reflection and glare; instruments with this finish are used during laser procedures to prevent light beam deflection.

Gold plating on an instrument signifies that tungsten carbide was incorporated in the manufacturing process. Tungsten carbide is an extremely

hard metal that is used to laminate scissor blades to increase and maintain sharpness and is inserted into the jaws of needle holders to increase strength and gripping abilities.

CARE AND HANDLING OF INSTRUMENTS

Surgical instruments are a large financial expense for medical facilities. Properly preparing, using, and processing instruments promotes patient safety, prolongs the life of the instrument, and decreases repair and replacement costs. All surgical instruments are designed for a specific use. Using them for any other purpose will damage or dull the instrument (e.g., using tissue scissors to cut drapes or dressings or using a hemostat to open a medication vial). Misuse of an instrument can also endanger patients. Simple steps can keep instruments in proper working order. Instruments should be handled individually or in small groups to prevent damage that might occur if they become entangled or are piled on top of one another. They should not be jostled around in the tray when setting up or looking for a certain item. Before, during, and after surgery, instruments should be placed onto the designated area. They should not be tossed or dropped. Heavy items and instruments should never be placed on top of another instrument. These types of mishandlings cause misalignment and dull blades and can damage instrument tips. To ensure patient safety, instruments should be inspected and tested before each surgical procedure. Instruments should be clean and free of debris, properly aligned, damage free, and in good working order.

During surgery, instruments should be wiped or rinsed with sterile water as they become soiled with blood and tissue. This ensures removal from the box lock, serrations, the jaws, and any crevice. Blood and tissue that is allowed to dry and harden can cause an instrument to become stiff and not work properly. This can also make the cleaning process difficult and interfere with the sterilization process. Nondisposable suction tips

should be periodically irrigated with a syringe and sterile water to remove trapped blood and debris. Saline should not be used to wipe, rinse, or soak instruments. Exposure to saline will cause corrosion and pitting.

After the surgical procedure, all disposable sharps and blades should be removed and discarded in a sharps container. Instruments should be opened, disassembled, and submerged in water or enzymatic solution. The instruments should be placed in the solution so that they do not become entangled or damaged. Heavy instruments should be placed first, and lighter, more delicate ones should be placed on top. Sharp edges or tips should be placed so that they do not endanger the personnel who will be cleaning them. Delicate instruments, rigid endoscopes, cameras, and fiberoptic light cords should be separated to prevent damage. All cords should be loosely coiled. Power saws and drills should never be immersed in solutions.

Microsurgical Instruments

Microsurgical instruments are delicate. Proper care and handling are essential to prevent damage. Generally, special storage containers are used to protect the instruments. These racks keep the instruments separate and help in identification by providing a place to label them. One should not drop these instruments, allow them to become entangled with each other, or place heavy items on top of them. All microsurgical instruments should be inspected for damage before use. Care should be exercised when handling these instruments. Many have sharp tips that can easily compromise the integrity of gloves and/or skin. When passing instruments, a surgeon should be able to remain focused and not have to move away from the microscope. Ringed forceps (cups, scissors, and nippers) are passed by holding the instrument just above the rings on the shaft and positioning against the palm of the surgeon's hand so he or she can easily place fingers into the loops. The instrument should be held in this position until the surgeon is allowed to adjust his or her fingers. Additional instruments (picks, knives, elevators, and suction tips) should be passed with the tips slightly downward and positioned into the surgeon's hand onto the web between the thumb and index finger (pencil style). Microsurgical instruments should be immediately retrieved from the surgeon to prevent unintentional dropping from the field. After each use, blood and debris should be removed from all instruments. Instrument tips wiped clean with a moistened instrument wipe or a sponge and suction tips should be irrigated often with water.

Powered Instruments

Powered surgical instruments have historically corresponded with surgical needs, predominantly in procedures involving bone. This progression has been important because the complexity of these have required the use of different types of implants. The use of power instruments decreased the use of manual instruments thereby reducing surgery time and improving overall outcomes. Powered surgical instruments are used to perform orthopedic; neurosurgery; ear, nose, and throat (ENT); and oral procedures as well as procedures on other bodily systems. These devices perform cutting, driving, drilling, and reaming and are driven by batteries, compressed gas, and electrical power. Each instrument consists of one or more handpieces and related accessories as well as disposable and limited reuse items, such as burs, saw blades, drill bits, and reamers. Power instruments should not be submerged in fluid or placed on top of other instruments. Power sources to these instruments should be disconnected or removed before the cleaning process begins.

PARTS OF AN INSTRUMENT

The overall design of an instrument is dependent on what function it will perform. All instruments have a basic standard design and will be modified according to function and type.

Components of this basic design include handles, ratchets, shanks, joints, jaws or blades, and tips (Figure 1-1).

Finger rings are on the proximal end and is the handle area of the instrument. Above the rings are shanks that define the length of the instrument, which is determined by the depth of the wound. Above the rings, attached to the shank may be ratchets that allow for the jaws to be closed and locked on tissues. Between the shanks and the jaw is the joint, which is where the two halves of the instrument are joined to permit for opening and closing. These joints are either a box lock or a screw joint. Beyond the joint are the jaws, which are the working portion of the instrument. The inner jaws, tips, and the shape determine how and on what tissues the instrument is used. Ringed instruments are placed in the palm of a surgeon's hand with the working end up.

Tissue forceps have a spring action joint at the distal end that holds the instrument open until compressed. The handle grip is where the surgeon's fingers are placed. The shanks determine the length of the forceps. The jaws and the tips are the working end of the forceps; these are determined by the type of tissue that is being grasped (Figure 1-2). Tissue forceps are held between the thumb and index finger with the distal joint end resting on the top of the hand like a pencil.

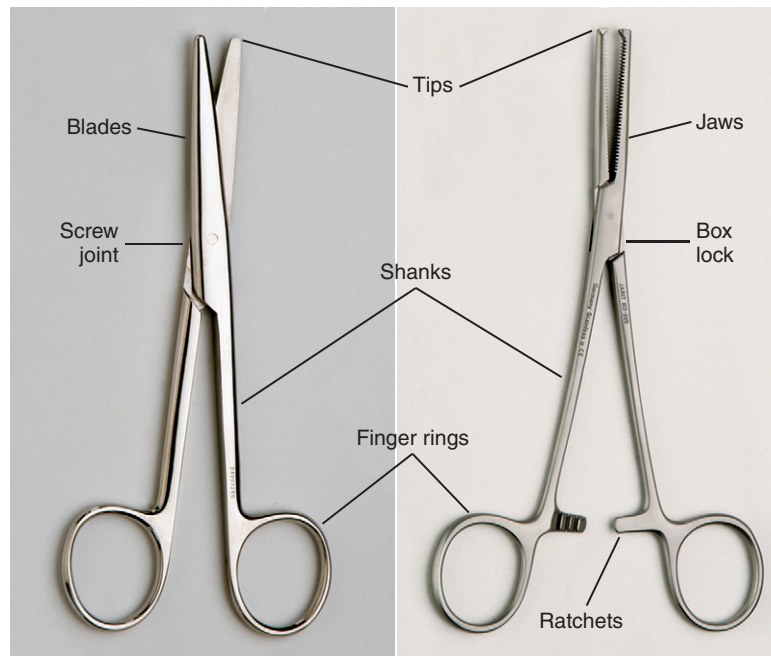


Figure 1-1 Mayo Scissors and Kocher forceps illustrating the parts of a ringed instrument.

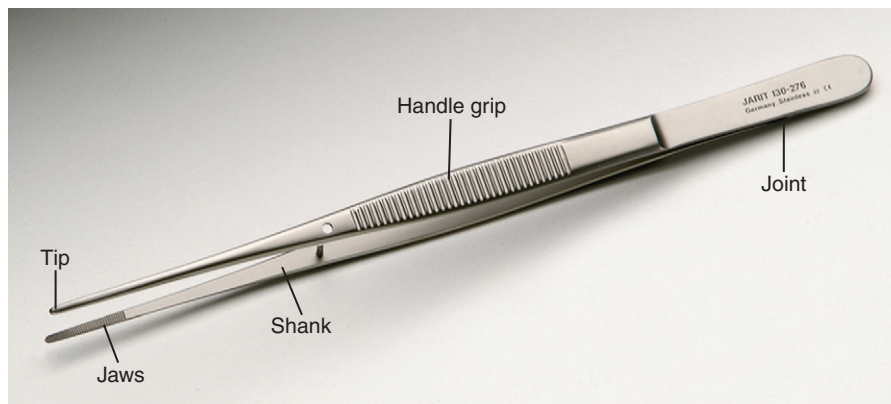


Figure 1-2 Plain tissue forceps illustrating the parts of a tissue forceps.

Retractors are used to hold a surgical wound open to expose the site that is being worked on. A handheld retractor will be designed with a handle, a shank, a blade or blades, and tips. The handle is where the retractor is grasped; this may be on one end or in the middle. The shank is responsible for the length and runs from the handle to the blade. The blade determines the depth to which the retractor is placed into the wound. The tip is at the end of the blade and differs according to where and how the retractor is utilized. The retractor that is pictured in Figure 1-3 is a double-ended retractor that has a blade on either end. The handle is positioned in the center. The position of the handle determines how the retractor is handed to a surgeon.

INSTRUMENT CATEGORIZATION

Whether an instrument is curved or straight, long or short, wide or narrow, sharp or dull, it is designed

for a particular task. An instrument is categorized according to its function. The nine categories include accessory, clamping and occluding, cutting and dissecting, grasping and holding, probing and dilating, retracting and exposing, suctioning and aspirating, suturing and stapling, and viewing.

Accessory

An accessory is an instrument that does not fall into any of the other categories but has a specific function and is an integral part of the surgical procedure. An example of an accessory item is a mallet, electrosurgical pencil, lens warmer, screwdriver, or harmonic scalpel.

Clamping and Occluding

Clamping and occluding instruments are used to compress vessels and other tubular structures to impede or obstruct the flow of blood and other



Figure 1-3 Richardson-Eastman double ended retractor illustrating the parts of a retractor.

fluids. These clamps are atraumatic ratcheted instruments that are straight, curved, or angled and have a variety of inner jaw patterns. These clamps may totally occlude or partially occlude the tissues between the jaws. A total occlusion clamp has the ability to completely compress or close the jaws at the initial engagement of the ratchet device. The partial occlusion clamp is capable of varying levels of compression. The jaws gradually come together as each increment of the ratcheting is employed. The most common example of a clamping and occluding instrument is the Crile hemostatic forceps or hemostat. Other examples are the Kelly forceps, Glover bulldog, Satinsky clamp, Doyen intestinal clamp, or Mixer forceps.

Cutting and Dissecting

Cutting and dissecting instruments are used to incise, dissect, and excise tissues. Cutting instruments have single or double razor-sharp edges or blades, such as a scalpel, scissors, or osteotomes. Dissecting instruments may have a cutting edge and come in a variety of designs. Examples include curettes, cone tip dissectors, and biopsy forceps.

Grasping and Holding

Grasping and holding instruments are designed to grip and manipulate body tissues. They are often used to stabilize tissue that is to be excised, dissected, repaired, or sutured. Tissue forceps are the nonratcheted style and are often referred to as pickups or thumbs. The tips may be smooth or serrated and may have interlocking teeth. They

vary in size and shape according to use. Common examples of tissue forceps are DeBakey, Adson, Cushing, Russian, and Ferris-Smith. The ratcheted type of grasping forceps can be curved or straight; the jaws may be smooth or serrated and have interlocking teeth or sharp prongs. Some examples are the Kocker forceps, Allis forceps, bone-holding forceps, and tenaculum.

Probing and Dilating

Probing instruments are used to explore a structure, opening, or tract. These instruments are often blunt, malleable, and wire-like instruments. Dilating instruments are used to gradually enlarge an orifice or tubular structure, to open a stricture, or to introduce another instrument. They come in sets numbered from the smallest to the largest. A few examples of dilators are Hanks, Van Buren, Bakes, and Mahoney.

Retracting and Exposing

Retracting and exposing instruments are designed to hold back or pull aside wound edges, organs, vessels, nerves, and other tissues to gain access to the operative site. They are generally referred to as retractors and are either manual (handheld) or self-retaining (stay open on their own). Retractors have one or more blades. These blades are used for holding back tissues without causing trauma and should not be confused with a cutting blade. Retractor blades are usually curved or angled and may be blunt or have sharp or dull prongs. The blades will vary in size according to the depth of the wound and the area of

placement. Handheld retractors consist of a blade attached to some type of handle, which is pulled back or held in place by the user. Manual retractors are often used in pairs, one on each side of the wound. Some are double-ended, with a blade on each end with a slight variation in size or shape. Examples of handheld retractors are Parker, Joseph skin hook, Senn, Ragnell and Richardson. Self-retaining retractors are holding devices with two or more blades that spread the wound apart or hold tissues back. A self-retaining retractor has a ratchet, crank, spring, or locking device that holds it open. Some will have permanent attached blades, while others will have interchangeable blades that come in a variety of shapes, lengths, and widths, depending on the operative location. Screws, hooks, wing nuts, or clamping devices secure the blades in place. Some retractors attach directly to the operating room table for stability. Examples of self-retaining retractors are the Balfour, Omni tract, Bookwalter, Burford, Finochietto, Weitlaner, and Gelpi.

Suctioning and Aspirating

Suctioning and aspirating devices are used to remove blood, fluid, and debris from operative sites. These suction tips may be disposable or nondisposable and come in a variety of shapes and sizes according to use. Some examples of these hollow tips include the Yankauer, Frazier, Poole, and Barron.

Suturing and Stapling

Suturing instruments are used to ligate, repair, and approximate tissues during a surgical procedure. This mainly includes needle holders, which

are used to hold curved suture needles, but also includes other items such as a knot pusher, endo stitch, and endo loops. Stapling devices are used to ligate, anastomose, or approximate tissues. Stainless steel, titanium, and Insorb absorbable material are used for stapling. Staples are designed to be noncrushing when inserted into the tissues to promote healing. A nondisposable stapler uses disposable stapling cartridges that have to be assembled during setup. Disposable staplers are assembled, packaged, and sterilized by the manufacturer. They are designed to be reloaded with a new cartridge for multiple uses on the same patient. Some examples of stapling devices are skin staplers, ligating clips, linear cutters, and intraluminal staplers.

Viewing

Viewing instruments allow visualization of a structure or cavity. Various examples include the nasal speculum, ridged and flexible endoscopes, and endoscopic camera.

Sets

Instruments are generally placed into sets according to the type of procedures that are performed at the facility. Typically, instruments from each category will be selected for the assembly of a set. These sets are then assembled, labeled, sterilized, and stored for later use. Instrument sets are often labeled according to the procedure, degree of the procedure (i.e., major or minor) or the specialty area. For instance, a hysterectomy set would be used to perform a hysterectomy, and an orthopedic basic set can be used for a number of orthopedic procedures.

CHAPTER

2

Basic Instruments

ACCESSORY INSTRUMENTS



Instrument: ELECTROSURGICAL PENCIL

Other Names: Bovie, cautery, monopolar, diathermy

Use(s): Monopolar cautery uses electrical current to coagulate and cut blood vessels and tissues to provide homeostasis; also used for dissection.

Description: This is a disposable instrument that usually comes packaged with a blade tip and a holster. The current is activated by a switch or button on the pencil or with a foot pedal. There are several different types of interchangeable electrode tips that fit into the hand piece. Some of the common types of tips are blade, ball, needle, and extended blade tips.

Instrument Insight: All monopolar electrodes require a dispersive pad because the electricity

enters the patient's body. Monopolar current travels from the generator, to the active electrode, and through the patient's body; the current is then captured by the dispersive pad, which channels it back to the generator, completing the closed circuit. A scratch pad is used to remove charred blood and tissue from the electrode tip. The tip may also be Teflon coated for ease in cleaning.

⚠ CAUTION: The tip of the pencil becomes hot after extended use. When not in use the pencil should be placed in the holster to prevent burning the drapes or the patient.



Instrument: HARMONIC SCALPEL

Other Names: Ultrasonic scalpel

Use(s): The harmonic scalpel is a grasping instrument that delivers ultrasonic energy between the jaws to coagulate and divide tissue by low-temperature cavitation.

Description: This device has a manufacturer-packaged disposable hand piece. A nondisposable

cord and wrench are also needed. These two components need to be packaged and sterilized by the facility.

Instrument Insight: Blood and tissue can build up on the jaws and may need to be removed periodically with a moistened sponge.

CLAMPING AND OCCLUDING INSTRUMENTS



Instrument: CRILE FORCEPS

Other Names: Hemostat, snap, clamp, Kelly, stat

Use(s): Used for occluding bleeders before cauterization or ligation.

Description: A curved or straight clamp with horizontal serrations that run the complete length of the jaws.

Instrument Insight: The curved Crile is the most widely used clamp in all specialty areas.

**Instrument: HALSTEAD FORCEPS**

Other Names: Mosquito, Hartman

Use(s): Used for occluding bleeders in small or superficial wounds before cauterization or ligation. Used often for delicate or small, confined procedures. Some examples are plastics, pediatric, thyroid, and hand procedures.

Description: A small, curved or straight clamp with fine tips and horizontal serrations that run the length of the jaws.

Instrument Insight: These forceps are much smaller than a Crile or a Kelly.

**Instrument: KELLY FORCEPS**

Other Names: Hemostat, Crile, clamp

Use(s): Used for occluding bleeders before cauterization or ligation.

Description: A curved or straight clamp with horizontal serrations that run about half the length of the jaws.



Instrument: ROCHESTER-PÉAN FORCEPS

Other Names: Péan, Mayo

Use(s): Used for occluding larger blood vessels and tissue before ligation, usually in a deeper wound or on heavier tissue.

Description: Curved or straight clamp that has heavier, broader jaws with horizontal serrations that run the length of the jaws.



Instrument: CARMALT FORCEPS

Other Names: Carmalt, big curved

Use(s): Used for occluding larger blood vessels and tissue before ligation, usually in a deeper wound or on heavier tissue.

Description: Curved or straight clamp with a crosshatch pattern at the tips that continue with vertical serrations that run the length of the jaws.

**Instrument: MIXTER FORCEPS**

Other Names: Right angle, Gemini, Lahey, obtuse clamp, ureter clamp

Use(s): Is used to clamp, dissect, and occlude tissue. Is often used to place a tie or vessel loop under and around a tubular structure such as a

vessel or a duct, enabling the surgeon to grasp the ligature or loop and pull it up and around the structure to either ligate or retract.

Description: A 75° angle clamp with horizontal serrations that run the length of the jaws.

**Instrument: ADSO FORCEPS**

Other Names: Tonsil Schnidt, fancy clamp

Use(s): Clamps small vessels in a deep wound or holds tonsil sponges.

Description: A fine curved or straight clamp with horizontal serrations running halfway down the jaws. The shanks are longer than those of a Crile or a Kelly.

CUTTING AND DISSECTING INSTRUMENTS

Instrument: STRAIGHT MAYO SCISSORS

Other Names: Suture scissors

Use(s): Used for cutting suture.

Description: Heavy scissors with straight blades.

Instrument Insight: Use the very tips of the scissors when cutting suture. Slightly rotate the

scissors to visualize the knot or the appropriate length of the suture tail that will remain.

CAUTION: It is important to always check the screw to ensure it is fully tightened to prevent it from dropping into the wound.



Instrument: CURVED MAYO SCISSORS

Other Names: Heavy tissue scissors

Use(s): Dissect or undermine heavy fibrous tissues.

Description: Heavy scissors with curved blades and blunt or sharp tips.

Instrument Insight: Tissue scissors are intended to cut tissue only and should never be used to

cut other items. Inappropriate use of the scissors will cause the blades to become dull and not function properly.

CAUTION: It is important to always check the screw to ensure it is fully tightened to prevent it from dropping into the wound.



Instrument: CURVED METZENBAUM SCISSORS

Other Names: Metz, tissue scissors

Use(s): Dissect and undermine delicate tissues.

Description: Longer, thinner scissors with curved or straight blades that can have blunt or sharp tips.

Instrument Insight: Tissue scissors are intended to cut tissue only and should never be used to

cut suture or other items. Inappropriate use of the scissors will cause the blades to become dull and not function properly.

CAUTION: It is important to always check the screw to ensure it is fully tightened to prevent it from dropping into the wound.



Instrument: LISTER BANDAGE SCISSORS

Other Names: Bandage scissors

Use(s): Cut dressings, drapes, and other items; also used in cesarean sections to open the uterus without harm to the baby.

Description: An angled blunt scissors in which the lower blade has a smooth, flattened tip.

Instrument Insight: The flattened tip is designed to give these scissors the ability to get under

dressings or drapes and cut the material without harming the patient.

CAUTION: It is important to always check the screw to ensure it is fully tightened to prevent it from dropping into the wound.

**Instrument: WIRE SCISSORS****Other Names:** Wire cutters**Use(s):** Cut small-gauge wire and suture.**Description:** Angled scissors with fine serrations on the blades and a circular notch in the inner jaws.**Instrument Insight:** The serrations are intended to facilitate grasping the item being cut. When

the wire is placed inside the notch, it gives the scissors the ability to exert additional pressure to cut heavier gauged wire.

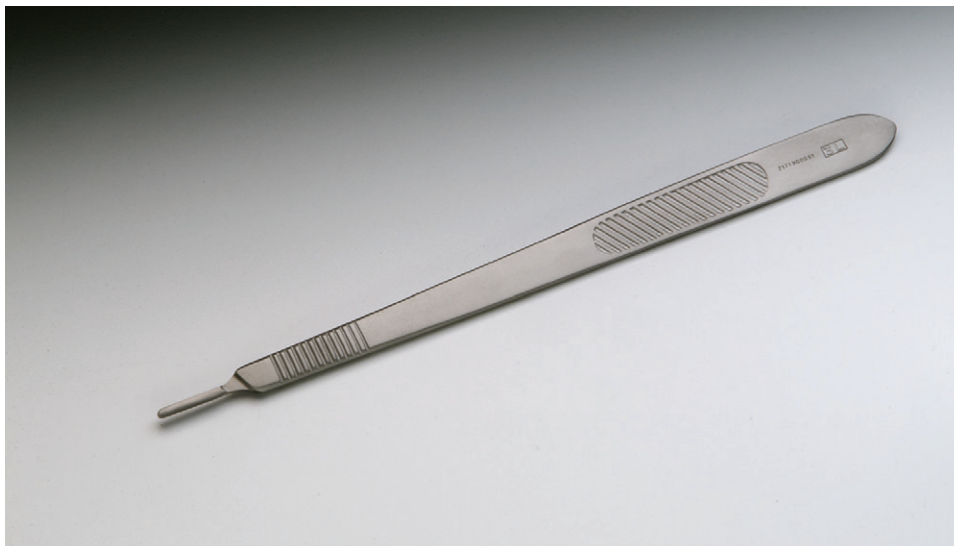
⚠ CAUTION: It is important to always check the screw to ensure it is fully tightened to prevent it from dropping into the wound.

**Instrument: #3 KNIFE HANDLE****Other Names:** #3 handle, scalpel handle**Use(s):** Knife handles are used to hold various blades to create a scalpel. Scalpels are used to make skin incisions or whenever a fine precision cut is necessary.**Description:** A #3 handle holds blades 10, 11, 12, and 15.**Instrument Insight:** Because the skin is not sterile, once the skin incision is made the scalpel

should be removed from the mayo stand, isolated, and reused only to incise the skin.

⚠ CAUTION: Never retrieve the scalpel from the surgeon's hand after use; allow the surgeon to place it in the "neutral zone."

⚠ CAUTION: Never use fingers to load or unload a knife blade from the handle. Always use a needle holder.

**Instrument: #3 LONG KNIFE HANDLE**

Other Names: Long knife, long handle

Use(s): Used for precision cutting deep within a wound.

Description: A #3 long knife handle holds blades 10, 11, 12, and 15.

⚠ CAUTION: Never retrieve the scalpel from the surgeon's hand after it is used; allow the surgeon to place it in the "neutral zone."

⚠ CAUTION: Never use fingers to load or unload a knife blade from the handle. Always use a needle holder.

**Instrument: #7 KNIFE HANDLE**

Use(s): Used when precision cutting is needed in a confined space or a deep wound.

Description: A #7 knife handle holds blades 10, 11, 12, and 15.

⚠ CAUTION: Never retrieve the scalpel from the surgeon after it is used; allow the surgeon to place it in the "neutral zone."

⚠ CAUTION: Never use fingers to load or unload a knife blade from the handle. Always use a needle holder.

**Instrument: #10 BLADE**

Use(s): Used for making skin incisions.

Description: An extensive body blade with a curved cutting edge to the tip.

Instrument Insight: To load a scalpel blade onto a scalpel handle, grasp the blade with a straight hemostat or just above the opening on the noncutting side. Line up the grooves on the handle with the opening on the blade. Make

sure that the angle of the blade matches the angle of the handle. Advance the blade onto the handle until it clicks in place. A scalpel blade is a single-patient use item that comes prepackaged and sterilized from the manufacturer.

⚠ CAUTION: Never use fingers to load or unload a knife blade from the handle. Always use a needle holder.

**Instrument: #11 BLADE**

Use(s): Used for puncturing the skin or to initiate the opening of an artery.

Description: An angled cutting edge that ascends to a sharp point.

Instrument Insight: The #11 blade is commonly loaded onto the #7 handle. A scalpel blade is a

single-patient use item that comes prepackaged and sterilized from the manufacturer.

⚠ CAUTION: Never use fingers to load or unload a knife blade from the handle. Always use a needle holder.

**Instrument: #12 BLADE**

Other name: Sickle knife

Use(s): A #12 blade is sometimes used during tonsillectomies, parotid surgeries, septoplasties, and during cleft palate procedures. It can also be utilized for removal of calculi in the ureter and the kidney (ureterolithotomies and pyelolithotomies).

Description: A small, crescent shaped blade sharpened along the inside edge of the curve.

Instrument Insight: The #12 blade is commonly loaded onto the #7 handle but may also be used on a #3 regular or long. A scalpel blade is a single-patient use item that comes prepackaged and sterilized from the manufacturer.

⚠ CAUTION: Never use fingers to load or unload a knife blade from the handle. Always use a needle holder.

**Instrument: #15 BLADE**

Use(s): Used for creating small precise incisions.

Description: A narrow blade that has a small, rounded cutting edge.

Instrument Insight: Commonly used for pediatric or plastic/reconstructive surgery. A scalpel blade

is a single-patient use item that comes prepackaged and sterilized from the manufacturer.

⚠ CAUTION: Never use fingers to load or unload a knife blade from the handle. Always use a needle holder.

**Instrument: #4 KNIFE HANDLE**

Use(s): Used with the #20 blade to create a larger and/or deeper incision in heavy tissue areas.

Description: Has a larger tip to accommodate the larger blades.

Instrument Insight: The #4 handle will hold blades 20, 21, 22, 23, 24, and 25. Never use

fingers to load or unload a knife blade from the handle. Always use a needle holder.

CAUTION: Never use fingers to load or unload a knife blade from the handle. Always use a needle holder.

**Instrument: #20 BLADE**

Use(s): Used with the #4 handle to create a larger and/or deeper incision and on heavy tissues and bone.

Description: A broader body blade with a curved cutting edge to the tip.

Instrument Insight: Blades should never be loaded with your fingers.



Instrument: BEAVER HANDLE

Other Names: Round handle

Use(s): Used when precision cutting is needed in a confined space or incising a small structure. The beaver knife is commonly used in ENT, ophthalmic, neurology, podiatry, and small orthopedic procedures.

Description: Round handle with a ball tip that screws into the handle to tighten the blade in place.

The rounded tip has a slot that accepts the blade. As the tip is screwed into the handle, it tightens to hold the blade. Many blades designed for specific purposes and procedures are available.

Instrument Insight: There are many types and shapes of blades that will fit on the Beaver handle depending on surgeon's preference and procedure being performed.

GRASPING AND HOLDING INSTRUMENTS



Instrument: PLAIN ADSON TISSUE FORCEPS

Other Names: Adson dressing forceps

Use(s): Used for grasping delicate tissue.

Description: Fine tips with horizontal serrations.

Instrument Insight: All of the Adson tissue forceps are the same size and shape. They are differentiated by the inner tips.



Instrument: TOOTHED ADSON TISSUE FORCEPS

Other Names: Adson with teeth, rat tooth

Use(s): Aligns the edges of the wound during stapling of the skin; grasps superficial tissues so that Steri-Strips can be placed.

Description: The fine tips have two small teeth on one side and one small tooth on the other side that fit together when closed.

Instrument Insight: All of the Adson tissue forceps are the same size and shape. They are differentiated by the inner tips.

CAUTION: Exercise care when handling forceps with teeth. The sharp teeth can easily compromise the integrity of your gloves and those of the surgeon.



Instrument: BROWN-ADSON TISSUE FORCEPS

Other Names: Brown

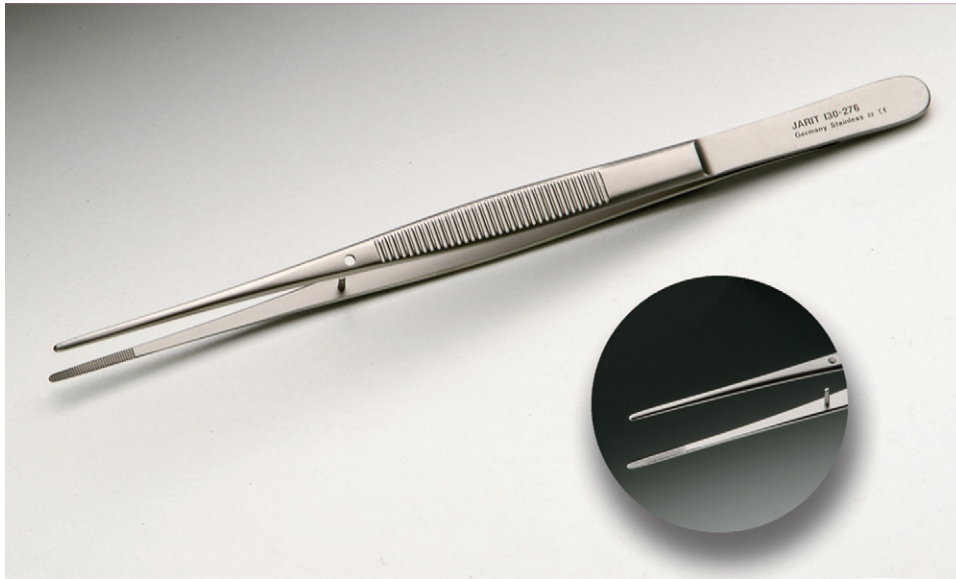
Use(s): Used for grasping superficial delicate tissues. Often used in plastic or hand surgery.

Description: On each side of the tip there are two rows of multiple teeth that interlock when closed.

Instrument Insight: All Adson tissue forceps are the same size and shape. They are differentiated

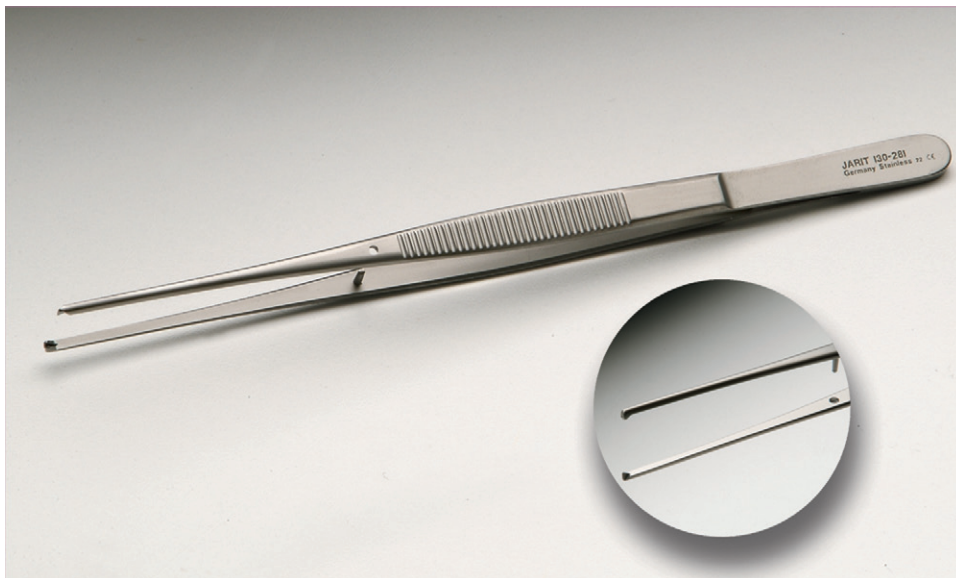
by the inner tips. It is important to ensure that the teeth are properly aligned and in working order before use.

CAUTION: Exercise care when handling forceps with teeth. The sharp teeth can easily compromise the integrity of your gloves, skin and those of the surgeon.

**Instrument: PLAIN TISSUE FORCEPS**

Other Names: Semken dressing forceps, smooth forceps, tissue forceps without teeth
Use(s): Used for grasping tissue and dressing application.

Description: Atraumatic tissue forceps with horizontal serrated tips that vary from fine to heavy.

**Instrument: TOOTHED TISSUE FORCEPS**

Other Names: Semken tissue forceps, rat tooth, tissue forceps with teeth
Use(s): Used for grasping moderate to heavy tissue and used during wound closure.
Description: The tips have two teeth on one side and one tooth on the other side that fits between the opposite when closed.

Instrument Insight: It is important to ensure the teeth are properly aligned and in working order before use.

⚠ CAUTION: Exercise care when handling forceps with teeth. The sharp teeth can easily compromise the integrity of your gloves, skin and those of the surgeon.

**Instrument: DEBAKEY TISSUE FORCEPS****Other Names:** DeBakey's, DeBakes**Use(s):** Grasps numerous types of tissue; commonly used in cardiac, vascular surgery, and gastrointestinal procedures.**Description:** An atraumatic tissue forceps with an elongated, narrowed blunt tip. A set of parallel fine serrations runs the length of one jaw with a

center row of serrations on the opposite side that interlocks to grip when closed.

Instrument Insight: These are considered a vascular tissue forceps, but they are commonly used in all specialty areas because of the ability to securely grip without causing damage to the tissues.**Instrument: FERRIS-SMITH TISSUE FORCEPS****Other Names:** Big ugly's**Use(s):** Grasps heavy tissue, muscle, and bone; often used in orthopedics, spinal, and obstetrics surgery.**Description:** This is always the same size and shape. The tips have two to one interlocking large teeth followed by a crisscrossed pattern serration.**Instrument Insight:** it is important to ensure that the teeth are properly aligned and in working order before use.**⚠ CAUTION:** Exercise care when handling forceps with teeth. The sharp teeth can easily compromise the integrity of your gloves, skin and those of the surgeon.



Instrument: RUSSIAN TISSUE FORCEPS

Other Names: Star, Russian star, Russians

Use(s): Used for grasping dense tissues and used during wound closure.

Description: Rounded tips with starburst pattern serrations.



Instrument: TOWEL CLIP (PENETRATING)

Other Names: Backhaus towel clip, Roeder towel clip, Jones

Use(s): Used for holding towels in place when draping, when grasping tough tissue, and during reduction of small bone fractures.

Description: A ratcheted instrument with curved, sharp, tine-like jaws.

Instrument Insight: Used in all disciplines. Never use penetrating clips to attach the electro-surgical unit (ESU), suction, or any other item to

the drapes. This will perforate the drapes and compromise the sterile field.

⚠ CAUTION: When clipping towels together, be careful not to penetrate the patient's skin.

⚠ CAUTION: Exercise care when handling penetrating forceps. The sharp tips can easily compromise the integrity of your gloves, skin and those of the surgeon.



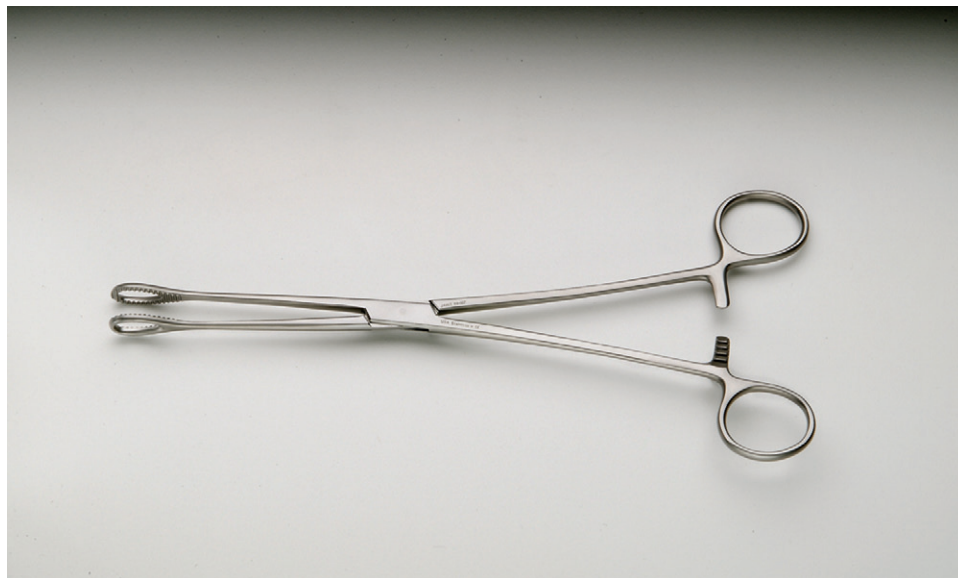
Instrument: NONPENETRATING TOWEL CLIP

Other Names: Atraumatic towel clamp

Use(s): Used for attaching Bovie and suction to the drapes.

Description: There are many different types of towel clamps; they may be metal or plastic and may have a variety of nonpenetrating tips.

CAUTION: Care should be taken not to clamp the patient's skin between the jaws when attaching accessory devices to the drapes.



Instrument: FORESTER SPONGE FORCEPS

Other Names: Fletcher, sponge stick, ring forceps

Use(s): Used for creating a sponge stick, for grasping tissues such as the lungs, or for removing uterine contents.

Description: Can be curved or straight and has two round tips with horizontal serrations.

Instrument Insight: To assemble a sponge stick, fold a 4 × 4 Raytec in thirds and then in half and attach it to the ring forceps. A sponge stick can be used for the surgical preparation (painting), to absorb blood, or for blunt dissection in deep wounds.

**Instrument: ALLIS FORCEPS**

Use(s): Used for lifting, holding, and retracting slippery dense tissue that is being removed. Commonly used for tonsils; for vaginal, breast, and thyroid tissues; or for grasping bowel during a resection.

Description: Curved or straight with multiple, interlocking fine teeth at the tip that reduce injury to the tissues.

Instrument Insight: It is important to ensure the teeth are properly aligned and in working order before use.

**Instrument: BABCOCK FORCEPS**

Use(s): Used for grasping and encircling delicate structures such as ureters, fallopian tubes, bowel, ovaries, and appendix.

Description: An atraumatic forceps with a flared, rounded, hollow end with smooth, flattened tips.



Instrument: KOCHER FORCEPS

Other Names: Koch, Ochsner

Use(s): Used for grasping tough, fibrous, slippery tissues such as muscle and fascia.

Description: The jaws have horizontal serrations and two to one large interlinking teeth at the tip.

Instrument Insight: It is important to ensure the teeth are properly aligned and in working order before use.

CAUTION: Exercise care when handling forceps with teeth. The sharp teeth can easily compromise the integrity of your gloves and those of the surgeon.

RETRACTING AND EXPOSING INSTRUMENTS



Instrument: ARMY-NAVY RETRACTOR

Other Names: Army's, Navy's, U.S. retractor

Use(s): Used for retraction of small superficial incisions to allow better exposure.

Description: A hand-held, double-ended retractor with an oval fenestration in the handle and a

lateral curve to the blades on each end. One end is longer than the other so that it can be placed deeper into the wound.

Instrument Insight: Often packaged in pairs.



Instrument: GOELET RETRACTOR

Use(s): Used for retraction of small superficial incisions to allow better exposure.

Description: Handheld, double-ended retractor with smooth, cup-shape curved blades with a

crescent-shaped lip. One end is longer than the other so that it can be placed farther into the wound. The size and shape never change.

Instrument Insight: Usually packaged in pairs.



Instrument: SENN RETRACTOR

Other Names: Cat paw

Use(s): Used for retraction of skin edges and deeper tissues of small incisions.

Description: Double-ended, handheld retractor in which one end has three sharp or dull claws and the other end is a small, narrow, lateral-bent blade.

Instrument Insight: Usually come packaged in pairs. Always hand to the surgeon with the sharp claws facing downward.

⚠ CAUTION: Exercise care when handling retractors with sharp claws. The sharp claws can easily compromise the integrity of your gloves and skin.



Instrument: MURPHY RETRACTOR

Other Names: Rake

Use(s): Used for superficial retraction of wound edges.

Description: The retractor has four claws that may be blunt or sharp. The handle has a teardrop opening with two prongs on each side.

Instrument Insight: Usually come packaged in pairs. Always hand this retractor to the surgeon with the sharp claws facing downward.

CAUTION: Be cognizant of the sharp claws. Sharp edges may puncture gloves and scratch the skin.



Instrument: VOLKMAN RETRACTOR

Other Names: Rake, Israeli

Use(s): Used for superficial retraction of wound edges.

Description: These may have two to six claws that may be blunt or sharp. The handle has a teardrop opening.

Instrument Insight: Usually come packaged in pairs. Always hand this retractor to the surgeon with the sharp claws down.

CAUTION: Be aware of the sharp claws. Sharp edges may puncture gloves and scratch the skin.

**Instrument: RIBBON RETRACTOR**

Other Names: Malleable

Use(s): Used for retraction of organs and intestines in a wound.

Description: A handheld, smooth, flat metal strip with rounded ends. These come in many different lengths and widths.

Instrument Insight: Can be bent or molded as needed for use.

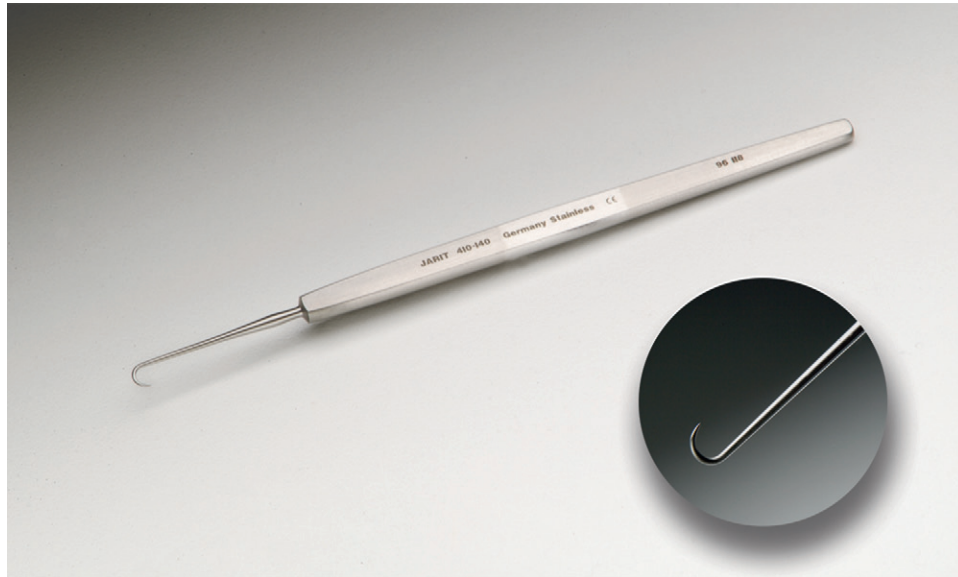
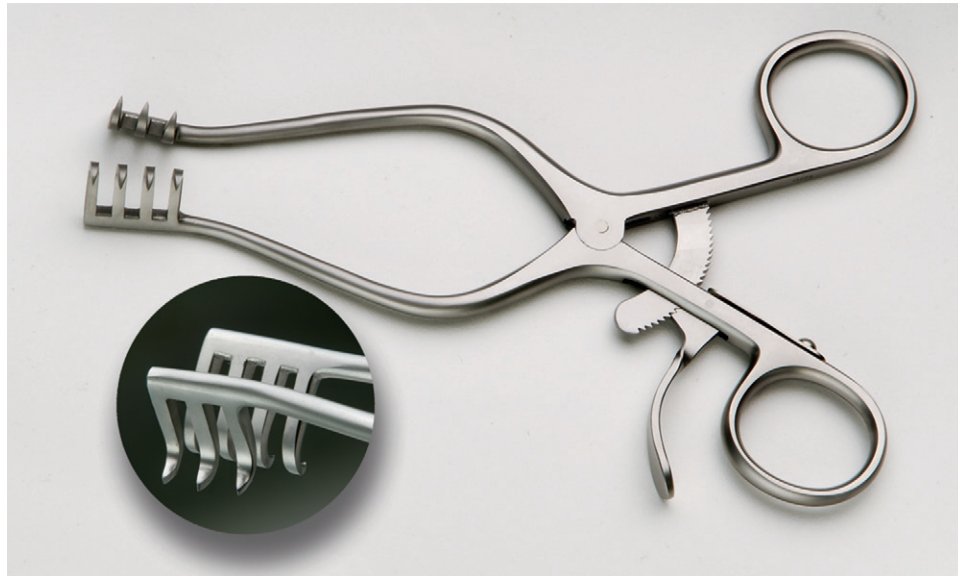
**Instrument: PARKER RETRACTOR**

Other Names: Park bench, nested right angle

Use(s): Used for retraction and exposure of a small or shallow wound.

Description: Handheld, double-ended with smooth, rounded ends.

Instrument Insight: Usually packaged in pairs.

**Instrument: SKIN HOOK****Other Names:** Joseph, Gillies**Use(s):** Used for retraction of the skin edges.**Description:** A small hand-held instrument with one or two sharp hooks at one end.**Instrument Insight:** Always hand instrument to the surgeon with the hook(s) down.**⚠ CAUTION:** The hooks are very sharp. Exercise care when handling sharp instruments to avoid puncture to gloves and/or skin.**Instrument: WEITLANER RETRACTOR****Use(s):** Holds wound edges open.**Description:** Self-retaining finger-ringed instrument with a ratchet/release device on the shanks, which holds them open in the wound. The tip has three outward-curved prongs on one side and four on the other side that may be sharp or dull.**Instrument Insight:** Always hand this retractor to the surgeon with the prongs down.**⚠ CAUTION:** The prongs may be very sharp. Exercise care when handling sharp instruments to avoid puncture to gloves and/or skin.

**Instrument: GELPI RETRACTOR**

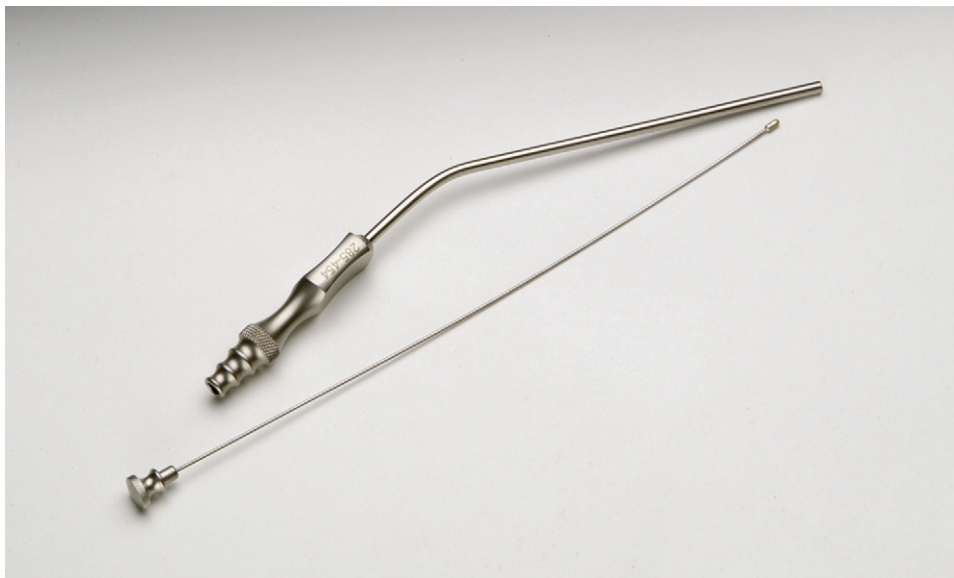
Use(s): Provides wound exposure, ranging from superficial to deep depending on the wound depth.

Description: Self-retaining, ringed instrument with a ratchet/release device on the shanks and two outward-turned sharp prongs, one on each side.

Instrument Insight: Always hand this retractor to the surgeon with the prongs down.

CAUTION: The prongs are sharp and can puncture gloves and skin.

SUCTIONING AND ASPIRATING INSTRUMENTS

**Instrument: FRAZIER SUCTION TIP**

Use(s): Used for suctioning in confined spaces such as the nasal cavity, in lumbar and cervical procedures, or in craniotomies.

Description: An angled cylindrical tube with a relief opening/hole on the handgrip. The diameter of the suction tube is measured on the French (F) scale and ranges from 3F to 15F.

Instrument Insight: The Frazier suction tip is packaged with a thin wire stylet. This stylet fits inside the suction tip to push out any tissue, blood, or debris that gets trapped while suctioning. The suction is increased by the relief/opening.

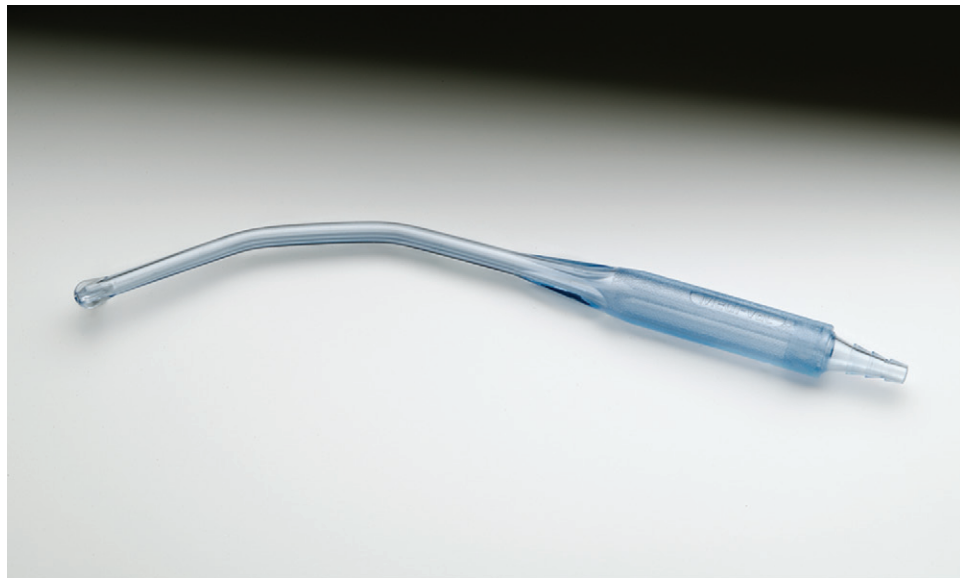
**Instrument: POOLE SUCTION TIP**

Other Names: Abdominal sucker

Use(s): Used for suctioning large amounts of blood and/or fluids from a body cavity. The inner cannula of this suction tip can be used to suction down the shaft of the femur during a total hip replacement procedure.

Description: This can be disposable or reusable and has two components: an outer sheath and an inner cannula.

Instrument Insight: Multiple fenestrations (holes) on the outer sheath allow for more suction. If less suction power is desired, the surgeon may use the inner cannula only.

**Instrument: YANKAUER SUCTION TIP**

Other Names: Tonsil suction tip, oral

Use(s): Used for suctioning in all types of wounds. It allows for effective suctioning without aspiration damage to the surrounding tissue.

Description: A hollow plastic tube with a grip handle and a slightly bent shaft that terminates with a bulbous tip and large opening.

Instrument Insight: The disposable Yankauer is the most widely used suction tip.

SUTURING AND STAPLING INSTRUMENTS



Instrument: CRILE-WOOD NEEDLE HOLDER

Other Names: Fine needle holder, fine needle driver

Use(s): Used for holding delicate to intermediate size needles when suturing.

Description: A narrow rounded tip with crisscross gripping pattern in the inner jaws.

Instrument Insight: The type of procedure and depth of the wound will determine the type and size needle holder.



Instrument: MAYO-HEGAR NEEDLE HOLDER

Other Names: Heavy Needle driver

Use(s): Used for holding heavy needles when suturing.

Description: A broader jaw that is rounded at the tip with crisscross pattern on the inner jaws.

Instrument Insight: The type of procedure and depth of the wound will determine the type and size needle holder.



Instrument: RYDER NEEDLE HOLDER

Other Names: Ryder needle driver, fine needle drive

Use(s): Used for holding delicate to intermediate size needles when suturing. Often used for vascular procedures.

Instrument Insight: Never used for grasping large, heavy needles. The type and size of a needle holder to be use will be determined the type of procedure and the depth of the wound.



Instrument: SKIN STAPLER

Use(s): Used during wound closure for skin approximation.

Description: A sterile, single-patient use instrument; it is preloaded with stainless-steel rectangular staples that are used for approximation of the skin. There are many different manufacturers and models of staplers. It has a handle and a trigger that is squeezed to fire the staples; at the tip is an alignment arrow.

Instrument Insight: The arrow at the tip of the device is to align the stapler with the approximated

skin edges for proper staple placement. Two persons often perform skin stapling. The surgeon or assistant uses two tissue forceps to grasp the skin edges and bring them together. The assistant or a surgical technologist positions the stapler over the wound, carefully aligning the arrow with the incision and squeezing the trigger until resistance is met. Once the staple is placed, remove the stapler and align it for the next firing until the wound is closed.

**Instrument: HEMOCLIP APPLIER****Other Names:** Clip applier**Use(s):** Used for occluding vessels or other tubular structures.**Description:** Angled tips with fine grooves in the inner jaws that slide over the clip to pick it up.

These are manufactured in various clip sizes and lengths in a color-coded cartridge for easy identification of clip size.

Instrument Insight: The size and type of clip have to match the appropriate clip applier.

**Instrument: SURGICLIP APPLIER****Other Names:** Hemoclip, ligacip**Use(s):** Used for occluding vessels or other tubular structures.

Description: A sterile, single-patient use instrument, preloaded with clips. These are manufactured in various clip sizes and lengths.

General Instruments

ACCESSORY INSTRUMENTS



Instrument: FERGUSON GALLSTONE SCOOP

Other Names: Scoop, spoon

Use(s): Used for removing stones from the gallbladder.

Description: Double-ended, spoon-shaped, with one end larger than the other.

Instrument Insight: Usually small, medium, and large scoops in the set.

CLAMPING AND OCCLUDING INSTRUMENTS



Instrument: CARTER-GLASSMAN
INTESTINAL CLAMP

Other Names: Glassman

Use(s): Used for clamping bowel during a resection.

Description: Can be straight or curved and has cardio grip inner jaws, which grasp but are atraumatic.



Instrument: DOYEN INTESTINAL CLAMP

Other Names: Doyen clamp

Use(s): Used for clamping bowel during a resection.

Description: Can be curved or straight; has smooth inner jaws.

Instrument Insight: The jaws of the Doyen are covered with rubber shods or shoelaces. Shoelaces are tubular woven cotton that slips over the entire jaws. Shods are rubber tubing that slides over the jaws. These help grip the intestine without causing trauma.

**Instrument: GEMINI CLAMP****Other Names:** Right angle, Lahey, Mixer**Use(s):** Used for dissecting tissue planes, clamping vessels, and placing a tie or vessel loop under and around a tubular structure, such as a vessel or duct. This enables the surgeon to grasp the ligature or loop and pull it up and around the structure to either ligate or apply traction.**Description:** A 90°-angle clamp with horizontal serrations that run the length of the jaws.**Instrument Insight:** The gemini, right angle, Lahey, and Mixer are often referred to as the same instrument depending on the region of the country where they are being used, but they are in fact differentiated by the inner jaws.**Instrument: LAHEY GALL DUCT FORCEPS****Other Names:** Right angle, gemini, Mixer**Use(s):** Used for dissecting tissue planes, clamping vessels, and placing a tie or vessel loop under and around a tubular structure, such as a vessel or duct.**Description:** A 90°-angle clamp with vertical serrations that run the length of the jaws.**Instrument Insight:** The gemini, right angle, Lahey, and Mixer are often referred to as the same instrument depending on the region of the country where they are being used, but they are in fact differentiated by the inner jaws.

CUTTING AND DISSECTING INSTRUMENTS



Instrument: GALLBLADDER TROCAR

Use(s): Used for draining the gall bladder of bile during an open cholecystectomy procedure.

Description: Two-piece instrument that consists of an outer sheath and a sharp obturator. The obturator fits inside the sheath.

Drainage is facilitated by pushing the sharp trocar into the gall bladder, then removing the obturator and attaching a syringe to aspirate the bile.

Instrument Insight: The obturator and sheath should be taken apart during the sterilization process. If it is inadvertently left together as one piece, the inside of the sheath and obturator would be considered unsterile and should be handed off the field as one piece. Do not separate the two pieces.

GRASPING AND HOLDING INSTRUMENTS



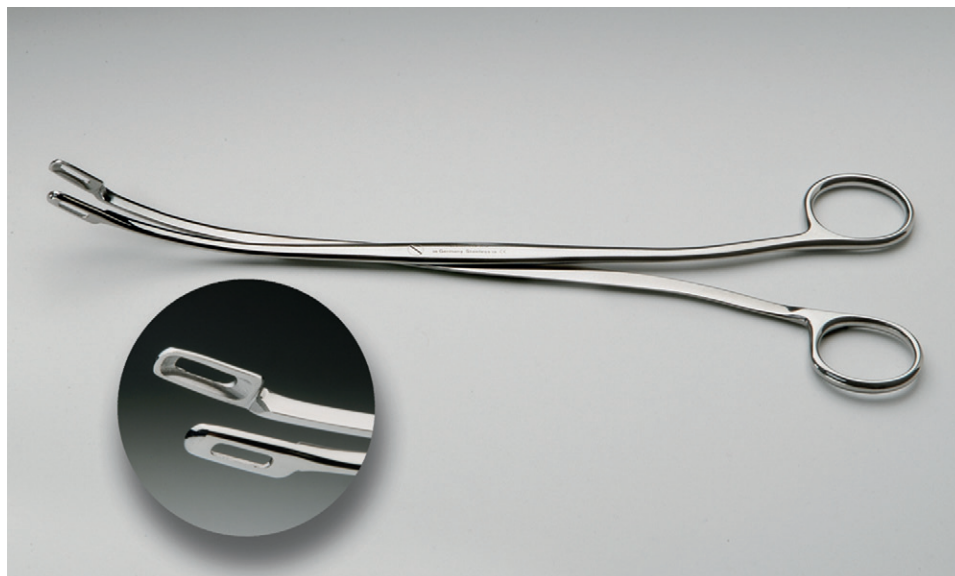
Instrument: PENNINGTON FORCEPS

Other Names: Duval, triangle, lung clamp

Use(s): Used for grasping tissue and organs during general procedures. Commonly used during intestinal and rectal procedures. Also

used for grasping the uterine layers during closure of a cesarean section.

Description: Triangular tips with horizontal serrations.



Instrument: DESJARDIN GALLSTONE FORCEPS

Other Names: Randall stone forceps

Use(s): Used for grasping polyps and stones in the common bile duct and gall bladder.

Description: A curved instrument with no ratchets, and the jaws work like scissors. The tips are oval cup-shaped with fenestrations.

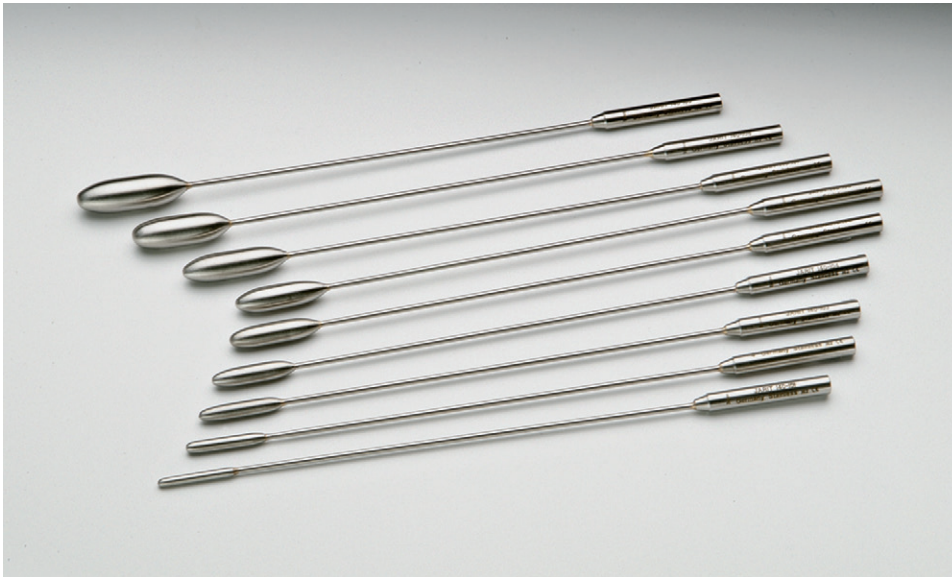
PROBING AND DILATING INSTRUMENTS



Instrument: PROBE AND GROOVED DIRECTOR

Use(s): Used to detect an obstruction in a tubular structure or determine the path and the extent of a fistula tract.

Description: The probe resembles a French eye blunt needle. The grooved director has a tongue-shaped handle and a concave channel, which guides the probe into the opening.



Instrument: BAKES COMMON DUCT DILATORS

Other Names: Common duct dilators

Use(s): Used to open and expand the common bile duct to allow passage of bile from the liver.

Description: Has an oval, solid stainless-steel tip that attaches to a narrowed stem, which extends to a solid, smooth handle.

Instrument Insight: Packaged as a set where each dilator graduates up in size. The stem is malleable and is often bent to allow passage into the duct.

RETRACTING AND EXPOSING INSTRUMENTS



Instrument: RICHARDSON-EASTMAN RETRACTOR

Other Names: Double-ended Rich, Eastman, Big Rich

Use(s): Used for retraction of wound edges.

Description: A hand-held double-ended retractor

with a lateral curvature of the blades. The bodies of the blades are concave with crescent-shaped lips that are laterally bent.

Instrument Insight: At initiation of the incision, the superficial end of the retractor is used; as the incision is deepened, the longer blade is used.



Instrument: RICHARDSON RETRACTOR

Other Names: Rich

Use(s): Used for retraction of wound edges.

Description: Has a hollow grip handle with a lateral curve to the blade. The body of the blade

is concave with a crescent-shaped lip that is laterally bent.

Instrument Insight: These are often packaged in a set of three: small, medium, and large.



Instrument: KELLY RETRACTOR

Use(s): Used for retraction of wound edges.

Description: Has a hollow grip handle with a lateral right-angle curvature of the blade. The body of the blade is slightly dipped with a crescent-shaped lip that is slightly bent.

Instrument Insight: Often confused with a Richardson retractor, but the blades are distinctly different.

**Instrument: DEAVER RETRACTOR**

Use(s): Used for deep retraction of organs and viscera.

Description: A flat, stainless-steel strip that resembles a question mark. The width and length vary according to need.

Instrument Insight: Retraction with a Deaver sometimes can be awkward because of the flat shape of the handle. To aid in maintaining a grip, the handle should be placed in the palm of the hand and the hook should be placed over the top of the hand.

**Instrument: HARRINGTON RETRACTOR**

Other Names: Sweetheart, Harrington heart

Use(s): Used for retraction deep in an abdominal wound; often used to retract the liver and intestine.

Description: Has a grip handle that extends into a curved, flat, stainless-steel strip. The end of the blade enlarges into a heart shape. The heart-shaped portion is overlaid with a smooth ridge to decrease the chance of injury to an organ.



Instrument: MAYO ABDOMINAL RETRACTOR

Other Names: Abdominal wall

Use(s): Used for retraction of the abdominal wall.

Description: The blade has a smooth, cup-shape curve with a crescent-shape lip.



Instrument: BALFOUR RETRACTOR

Other Names: Self-retaining

Use(s): Used for retraction of a large abdominal wound.

Description: A self-retaining retractor with lateral wire blades and a wide center blade. A Balfour set includes the frame, four lateral sides, and two center blades, which are interchangeable according to the depth needed. The lateral

blades may be solid, fenestrated, interchangeable, or fixed.

Instrument Insight: All the interchangeable pieces have to be counted separately (for example, one frame, four sides, and two blades). If the frame has any other removable parts, such as screws or wing nuts, these also need to be counted.



Instrument: BOOKWALTER

Other Names: Jaritrack retractor

Use(s): Used for retraction of large abdominal wounds.

Description: A large, self-retaining abdominal retractor that attaches to the operating table. It

has blades in various sizes and shapes that attach to a frame to enhance visualization during the surgical procedure.

Instrument Insight: Each individual piece has to be counted.



Instrument: PRATT RECTAL SPECULUM

Use(s): Used for providing exposure for visualization of the anus and rectum.

Description: A self-retaining speculum with rounded blades that open by squeezing the

handles together. Turning the screw on the side will hold the blades open.

Instrument Insight: Apply copious amounts of lubrication to the blades to prevent tissue damage.



Instrument: SAWYER RECTAL RETRACTOR

Use(s): Used for providing exposure for visualization of the anus and rectum.

Description: A hand-held retractor with a right-angle convex blade that extends to a hollow grip handle.

Instrument Insight: Apply copious amounts of lubrication to the blade to prevent tissue damage.

SUTURING AND STAPLING INSTRUMENTS



Instrument: LINEAR CUTTER-STAPLER

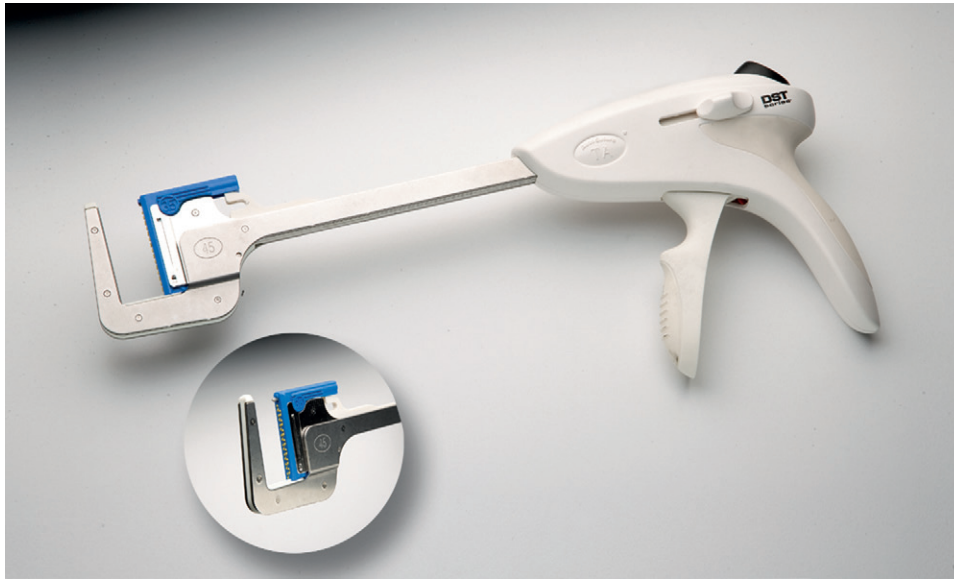
Other Names: GIA stapler

Use(s): Often used during gastric or bowel surgery for resection and reanastomosis. Also used to transect tissues in thoracic, gynecological, and pediatric procedures.

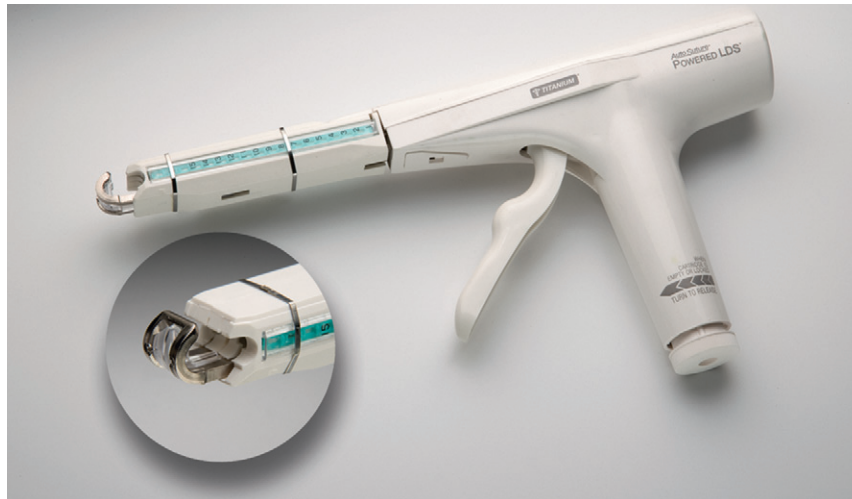
Description: Disposable, reloadable stapler that distributes two double-staggered rows of titanium staples while cutting the tissues between the rows. The length is determined by the tissue to be excised. This stapler

comes in 60-mm, 80-mm, and 100-mm lengths.

Instrument Insight: Activation is accomplished by sliding the firing knob on the sides of the stapler forward until it stops completely. The manufacturer recommends that the stapler can be reloaded seven times for a total of eight firings. When reloading the stapler, make sure to wipe off the opposite side of the stapler to assure any staples left from the first firing are removed. Any staples left behind can cause the stapler to misfire or not to fire at all.

**Instrument:** LINEAR STAPLER**Other Names:** TA stapler**Use(s):** Used for transection and resection of tissues during abdominal, gynecological, pediatric, and thoracic surgeries.**Description:** Disposable, reloadable stapler that distributes a double or triple (depending on model of stapler) staggered row of titanium

staples. A scalpel is used to excise the tissue along the length of the staple line.

Instrument Insight: Activation of the linear stapler is done by squeezing the handles together, which compresses the tissues between the jaws and engages the staples. The manufacturer recommends that the stapler can be reloaded seven times for a total of eight firings.**Instrument:** LIGATING AND DIVIDING STAPLER**Other Names:** LDS stapler**Use(s):** Used for ligation and division of blood vessels and other tissues during abdominal, gynecological, and thoracic procedures. The LDS is often used in gastrointestinal surgery to ligate and divide the greater omentum and the mesentery.**Description:** A disposable, single-use stapler that distributes two titanium staples within the jaw for ligation. A scalpel divides the tissue between the staples.**Instrument Insight:** Activation is done by gripping the handles together. The stapler cartridge contains 15 pairs of staples. The remaining number of staples after each firing is indicated on the side panel of the cartridge.



Instrument: INTRALUMINAL STAPLER

Other Names: CEEA stapler, EEA stapler, circular stapler

Use(s): Used for creation of end-to-end, end-to-side, or side-to-side anastomoses throughout the gastrointestinal tract. The stapler is used in both open abdominal and laparoscopic procedures.

Description: A disposable, single-use intraluminal stapler that places a circular, double-staggered row of titanium staples. Simultaneously following the staple formation, a circular knife blade cuts the excess tissue, creating a circular anastomosis.

Instrument Insight: The stapler is activated by compressing the handles together as far as they will allow. After the anastomosis, excess tissue that is transected needs to be inspected for completeness. There should be two complete circular rings of tissue, often called donuts. This is accomplished by turning the wing nut at the bottom of the handle counterclockwise, which causes the shaft to extend, allowing removal of the specimen.

Laparoscopic Instruments

ACCESSORY INSTRUMENTS

**Instrument:** ANTI-FOG SOLUTION

Other Names: Endo-fog, Fred, Dr. Fog

Use(s): Used for preventing the lens from fogging up during endoscopic procedures.

Description: Packaged with a bottle of solution and a sponge.

Instrument Insight: To use, remove paper backing from the sponge and place it on sterile drape of mayo stand. Remove the solution cap and place 5 or 6 drops of antifog solution onto the sponge. Wipe the end of the lens over the sponge and then blot with a sterile 4 × 4 sponge (do not wipe dry).

**Instrument: LENS WARMER**

Use(s): Used to warm the lens to body temperature to prevent condensation and fogging of the lens when entering the body cavity.

Description: The lens warmer that is pictured is disposable and comes in a sterile package.

To activate the warmer, lift the lid toward the rear of the device and squeeze the tagged area. This mixes the chemicals and causes warming.

Instrument Insight: There are many types of lens warmers and ways to warm a lens.

**Instrument: ENDO KITTNER**

Other Names: Endo kit, pusher, dissector, endo KD, Endo Peanut

Use(s): Used for blunt dissection of tissue plains during laparoscopic procedures. The tip may be used to apply direct pressure to bleeders.

Description: A 3-mm-long cylinder rod with a cotton gauze tip.

Instrument Insight: Can be inserted through a 5-mm or larger trocar.

**Instrument: INSUFFLATION TUBING**

Use(s): Used for creating and maintaining a pneumoperitoneum; delivers carbon dioxide from the insufflator to the abdominal cavity.

Description: Synthetic tubing 10- to 12-feet long with a Luer-Lok connector at the proximal end and a micron filter approximately 16 to 24 inches from the distal standard connection end. The

micron filter is designed to prevent cross-contamination between the patient and the insufflator.

Instrument Insight: The distal filter end is handed off the sterile field to be connected to the insufflator. Air should be purged from the tubing before it is connected to the abdominal cavity.

**Instrument: FIBEROPTIC LIGHT CORD**

Other Names: Light cord

Use(s): Used for illumination during endoscopic procedures; delivers high-intensity light through the endoscope.

Description: A 10-foot-long fiber optic cable with an endoscope adaptor at the proximal end and a light source adaptor at the distal end.

Instrument Insight: Exercise care when handling a fiber optic cord; it should never be placed under

a heavy object, dropped, twisted, or kinked because the tiny fibers inside can be easily damaged.

⚠ CAUTION: When not in use, the light source must be placed on standby or turned off. The intense heat from the beam can cause the patient's drapes or any flammable vapors around the patient to ignite.



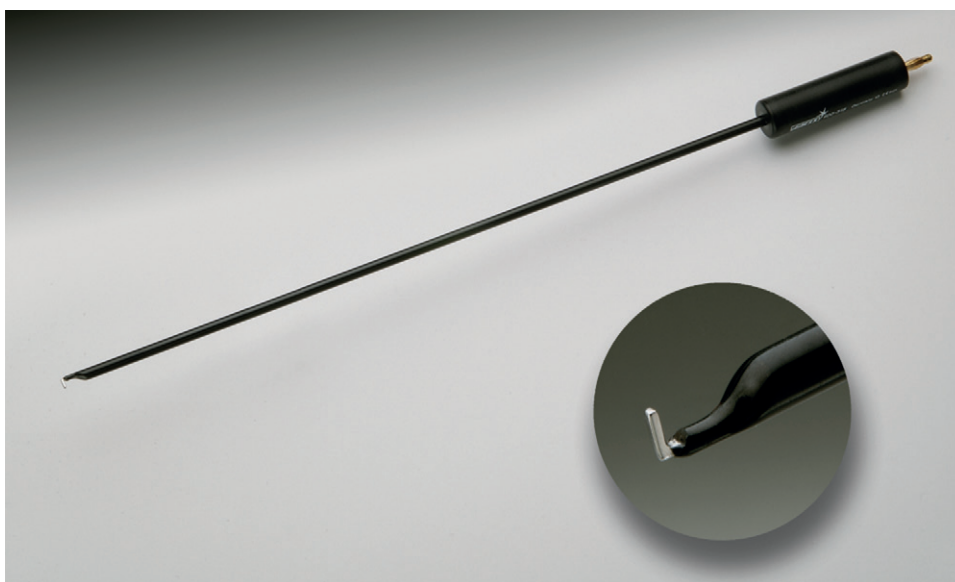
Instrument: **LIGASURE™**

Use(s): LigaSure works by applying a precise amount of bipolar energy and pressure to change the nature of the vessel walls. The collagen and elastin within the vessel walls fuse and reform into a single structure, obliterating the lumen, and creating a permanent seal.

Description: The system consists of a bipolar radio frequency generator and forceps. The

instruments are designed to mimic standard surgical clamps. They are available in a 7-inch Pean-style clamp (LigaSure Standard), a 9-inch Heaney-style clamp (LigaSure Max) and a 5-mm laparoscopic Maryland-style grasper/dissector (LigaSure Lap).

Instrument Insight: Blood and tissue can build up on the jaws and may need to be removed periodically with a moistened sponge.



Instrument: **L HOOK**

Use(s): Used for electrosurgical dissection of tissues and cauterizing vessels.

Description: A long cylinder-insulated rod with an L-shaped monopolar tip. Depending on model and manufacturer, the electrode can be reusable or disposable and may attach to a monopolar cord or directly to the ESU pencil.

Instrument Insight: The electrode is insulated at the tip to ensure the current is directed to the

targeted tissue. All monopolar electrodes require a dispersive pad on the patient because the electrical current passes through the patient's body. Before use, carefully inspect the instrument for any breaks in the insulation. Monopolar current travels from the generator to the active electrode and through the patient's body; it then is captured by the dispersive pad, which channels it back to the generator.

**Instrument: J HOOK**

Use(s): Used for electrosurgical dissection of tissues and cauterizing vessels during laparoscopic procedures.

Description: A long cylinder-insulated rod with a J-shaped monopolar tip. Depending on model and manufacturer, the electrode can be reusable or disposable and may attach to a monopolar cord or directly to the ESU pencil.

Instrument Insight: The electrode is insulated at the tip to ensure the current is directed to the

targeted tissue. All monopolar electrodes require a dispersive pad on the patient because the electrical current passes through the patient's body. Before use, carefully inspect the instrument for any breaks in the insulation. Monopolar current travels from the generator to the active electrode and through the patient's body; it then is captured by the dispersive pad, which channels it back to the generator.

**Instrument: KLEPPINGER BIPOLAR FORCEPS**

Use(s): Used for coagulation of tissues and vessels during laparoscopic procedures.

Description: A paddle-tip forceps that attaches to a bipolar cord. The bipolar is activated by grasping the targeted tissues between the jaws and stepping on the foot pedal.

Instrument Insight: Bipolar forceps deliver current from one tip, through the tissue grasped to the opposite tip. The electrical current does not pass through the patient's body; therefore no dispersive pad is required.



Instrument: ENDO HARMONIC SCALPEL

Other Names: Ultrasonic scalpel

Use(s): The harmonic scalpel is a coagulating instrument that delivers ultrasonic energy between the jaws to coagulate and divide tissue through low-temperature cavitation.

Description: This device has a manufacturer-packaged disposable hand piece. A nondisposable cord and wrench are also needed. These are packaged and sterilized by the facility.

Instrument Insight: Blood and tissue can build up on the jaws and may need to be removed periodically with a moist sponge.



Instrument: ENDO CATCH

Other Names: Endo Pouch, Endosac

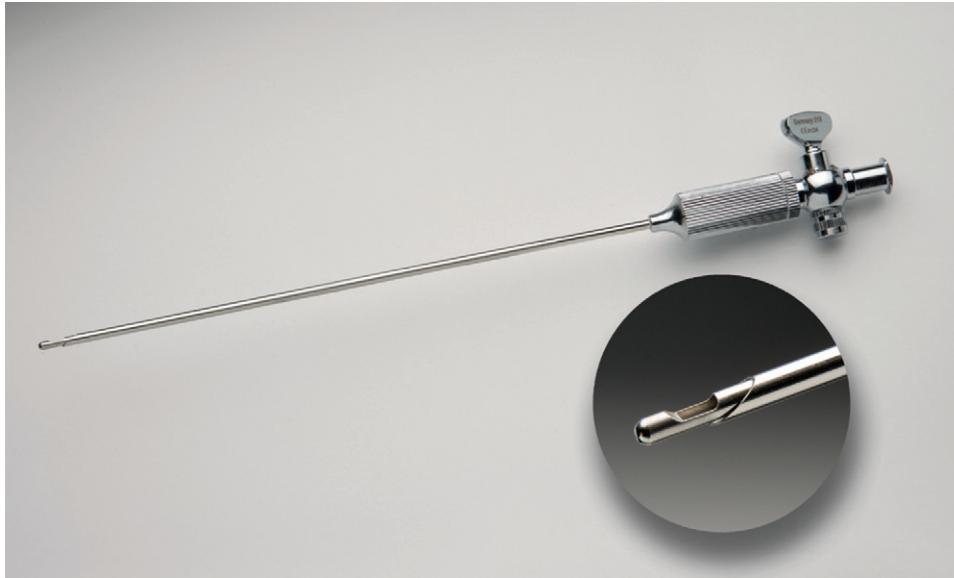
Use(s): Used to retrieve and contain specimens during endoscopic removal while minimizing spillage of contaminants into the abdominal cavity.

Description: A single-use specimen pouch that consists of a long cylindrical tube and a polyurethane pouch. The small pouch has a 2.5-inch opening and is 6 inches in depth; the

large size pouch has a 5-inch opening and a 9-inch depth.

Instrument Insight: The small pouch is ideal for removal of tissues such as the gallbladder, appendix, ectopic pregnancies, ovaries, lymph nodes, lung resections, and other structures. The larger specimen retrieval bag is generally used for advanced procedures including, but not limited to, laparoscopic bowel resections, splenectomies, and nephrectomies.

CUTTING AND DISSECTING INSTRUMENTS



Instrument: VERRES NEEDLE

Other Names: Insufflation needle

Use(s): Used to enter the peritoneum and deliver carbon dioxide into the abdominal cavity to create a pneumoperitoneum.

Description: A hollow bore with a spring-loaded, retractable blunt stylet that extends beyond the

tip of the needle. A stopcock at the proximal end is the connection site for the insufflation tubing.

Instrument Insight: The stylet retracts as the needle is pushed against tissue and will automatically advance upon entrance into the peritoneum.



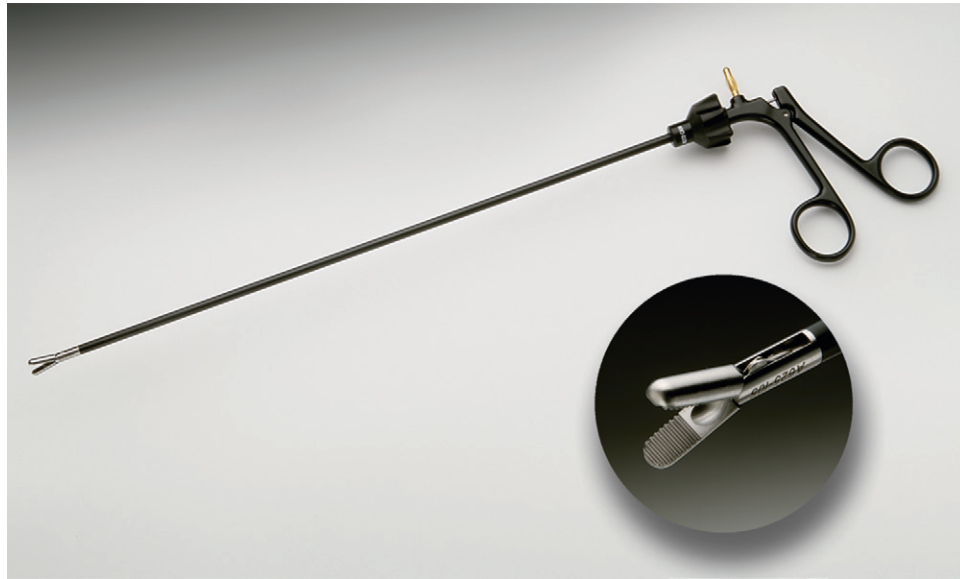
Instrument: ENDO RIGHT ANGLE FORCEPS

Other Names: Mixer

Use(s): Used for separating tissue planes and dissecting around tubular structures.

Description: A curved, right angle tip with cross-hatch serration running the length of the inner jaws.

Instrument Insight: Often dissectors have monopolar capabilities. The connection site for the cable is the gold stem at the handle end, and the current is activated with a foot pedal. As a general rule, dissectors do not have ratchet handles, but graspers do have ratchet handles.

**Instrument: BLUNT DISSECTOR**

Use(s): Used for blunt dissection and separation of tissue planes.

Description: A straight rounded tip with horizontal serrations and a proximal recess.

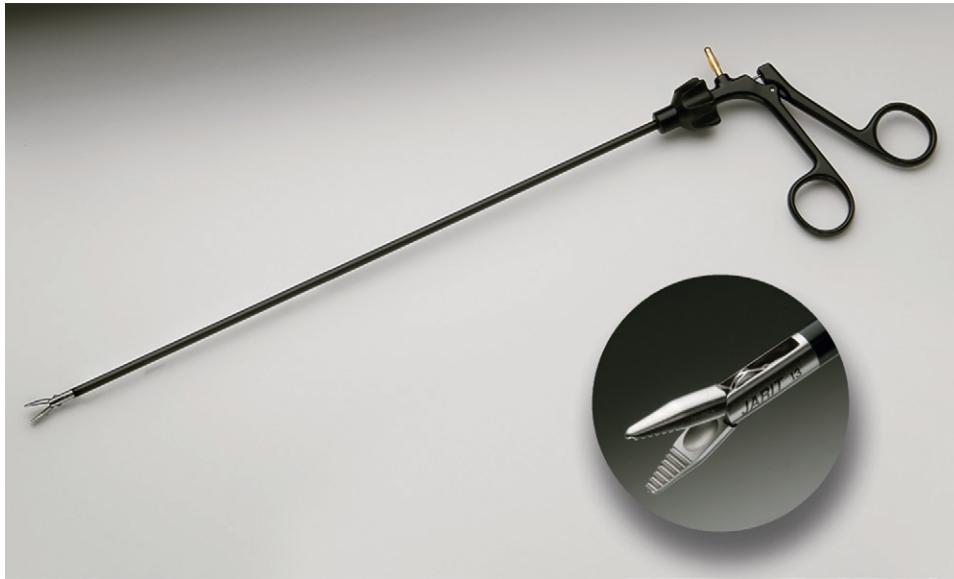
Instrument Insight: As a general rule, dissectors do not have ratchet handles, but graspers do. Often dissectors have monopolar capabilities. The connection site for the cable is the gold stem at the handle end, and the current is activated with a foot pedal.

**Instrument: DOLPHIN NOSE DISSECTOR**

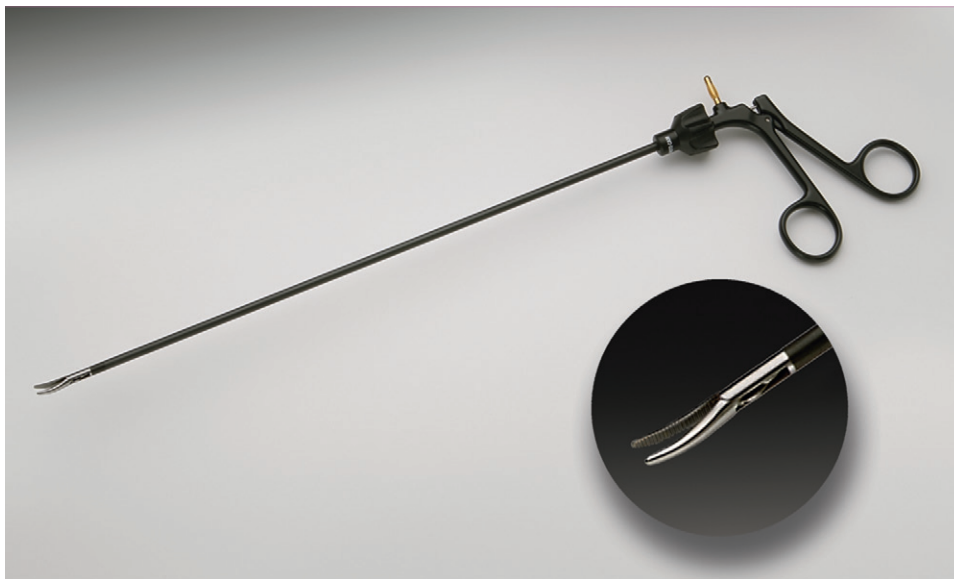
Use(s): Used for fine dissection and separation of thin adventitial tissue.

Description: Straight jaws that taper to a fine point with horizontal serrations and a proximal recess.

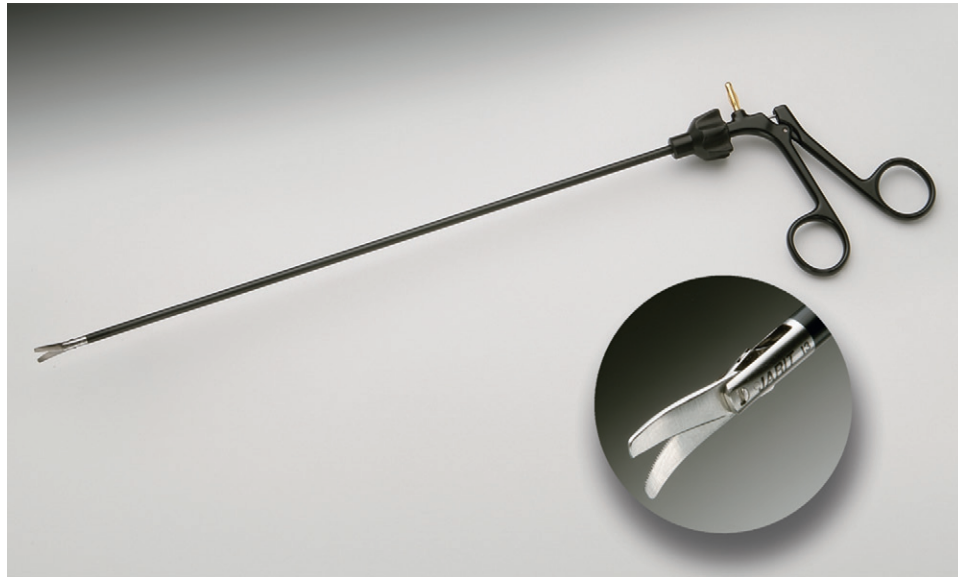
Instrument Insight: Often dissectors have monopolar capabilities. The connection site for the cable is the gold stem at the handle end, and the current is activated with a foot pedal. As a general rule, dissectors do not have ratchet handles, but graspers do.

**Instrument: CONE TIP DISSECTOR****Other Names:** Bullet nose dissector**Use(s):** Used for blunt dissection and separation of tissue planes.**Description:** Bullet-shaped tapered jaws with horizontal serrations and a proximal recess

Instrument Insight: Often dissectors have monopolar capabilities. The connection site for the cable is the gold stem at the handle end, and the current is activated with a foot pedal. As a general rule, dissectors do not have ratchet handles, but graspers do.

**Instrument: MARYLAND DISSECTOR****Use(s):** Used for fine dissection and separation of thin adventitial tissue.**Description:** Curved, fine-tapered jaws with horizontal serrations running the length of the jaws.

Instrument Insight: Often dissectors have monopolar capabilities. The connection site for the cable is the gold stem at the handle end, and the current is activated with a foot pedal. As a general rule, dissectors do not have ratchet handles, but graspers do.



Instrument: ENDOSCOPIC SCISSORS

Other Names: Endo shears, coag scissors

Use(s): Cut and dissect tissues, ducts, vessels, and suture material.

Description: Rounded, blunt tip with curved blades.

Instrument Insight: Generally endo scissors have monopolar capabilities. The connection site for the cable is the gold stem at the handle end, and the current is activated with a foot pedal.

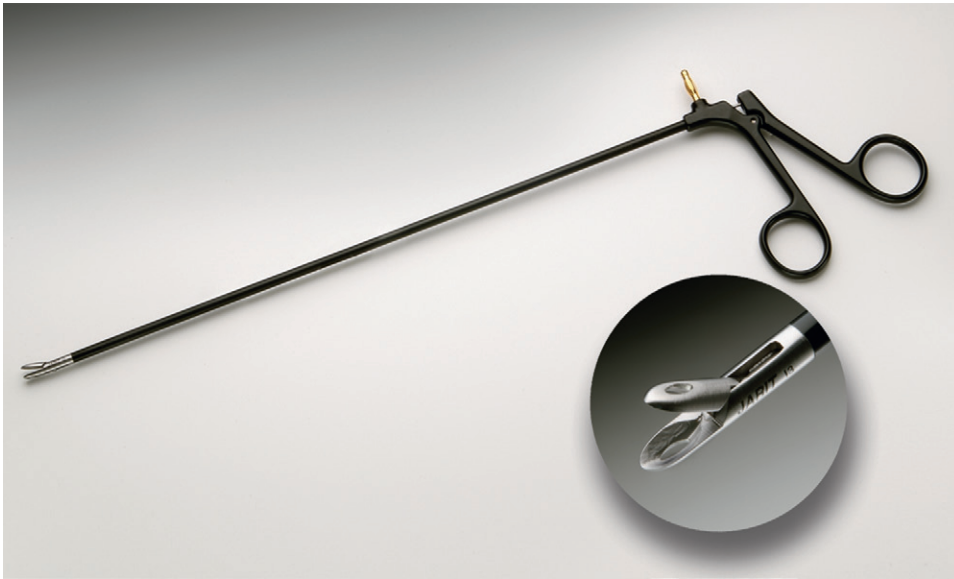


Instrument: ENDOSCOPIC HOOK SCISSORS

Use(s): Used to lift, isolate, and transect tissues such as ducts and vessels.

Description: Straight, squared-off blunt tip with concave arching of the inner cutting blades.

Instrument Insight: Generally endo scissors have monopolar capabilities. The connection site for the cable is the gold stem at the handle end, and the current is activated with a foot pedal.

**Instrument:** ENDOSCOPIC BIOPSY FORCEPS

Use(s): Used for excision of small pieces of tissue for examination.

Description: Sharp, oval cup-shaped jaws that are fenestrated.

Instrument Insight: To prevent crushing or damaging the biopsy tissue, it can be swished in saline or pushed out with a fine needle through the fenestration in the jaws.

**Instrument:** ENDOSCOPIC BIOPSY PUNCH

Use(s): Used for excision of small pieces of heavy tissue for examination.

Description: Rectangular-shaped hollow jaws; the upper jaw has a sharp rim that fits inside

the serrated edge of the lower jaw when closed.

Instrument Insight: To prevent crushing or damaging the biopsy tissue, it can be swished in saline or pushed out with a fine needle.

**Instrument: VERSA PORT TROCARS**

Use(s): Used to create an instrument port in which the endoscope and instruments can be introduced and exchanged through the cannula.

Description: A single-use, V-shaped, scalpel-bladed trocar with a spring-locking shield and a trocar cannula three-way stopcock. Versa port trocar sizes are 5 mm, 5-11 mm, and 5-12 mm. Rapid change continues to occur in the development and improvement of all trocars. Those pictured represent a few manufacturer variations.

Instrument Insight: Upon entrance into a cavity, the shield advances to cover the blade, reducing the potential for injury to internal structures. The trocar cannula has a self-adjusting seal that prevents pneumoperitoneal loss when exchanging instruments and a three-way stopcock for gas insufflation and rapid desufflation. The self-adjusting seal accommodates from 5 mm to 12 mm as appropriate.

**Instrument:** VISIPOINT

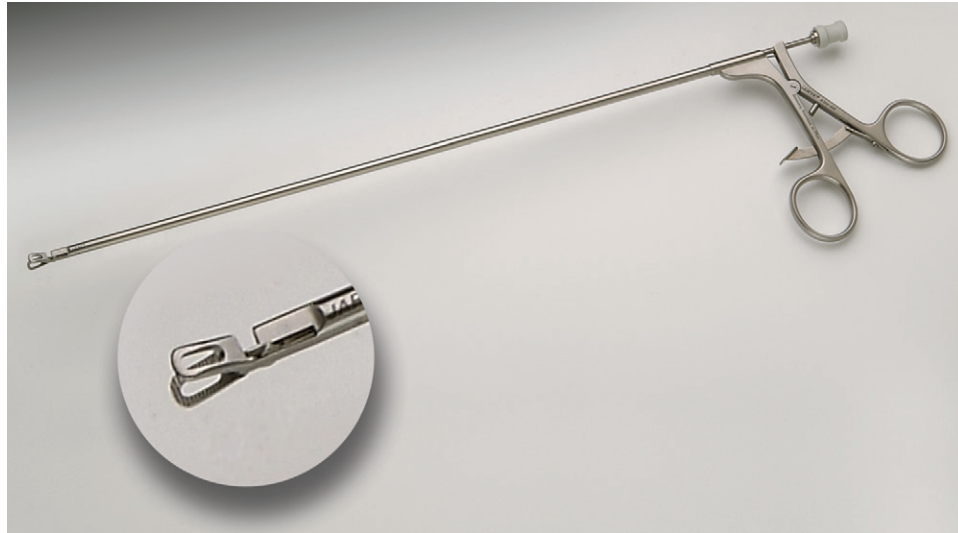
Other Names: Optical trocar

Use(s): Used to create an instrument port in which the endoscope and instruments can be introduced and exchanged through the cannula.

Description: A single-use, gun-like optical trocar that consists of a sheath with a blunt clear dome at the distal end that encases a crescent shaped knife blade. The pistol grip handle includes a trigger and an opening at the top that accommodates a 10-mm laparoscope, which allows for visualization through the clear dome as the sheath passes through the abdominal or thoracic body wall. When the trigger is squeezed, the

blade extends approximately 1 mm beyond the dome and instantaneously retracts. This action allows for a controlled, sharp dissection through the tissue layers. The Visiport™ is available in 5 mm to 11 mm or 5 mm to 12 mm diameters.

Instrument Insight: When entering into a cavity, the clear dome shields the blade there by reducing the potential for injury to internal structures. The trocar cannula has a self-adjusting seal that prevents pneumoperitoneal loss when exchanging instruments and a three-way stopcock for gas insufflation and rapid desufflation. The self-adjusting seal accommodates 5 mm to 12 mm as appropriate.

GRASPING AND HOLDING INSTRUMENTS**Instrument: ENDOSCOPIC CHOLANGIOGRAM FORCEPS**

Other Names: Olsen clamp

Use(s): This forceps is used to grasp the cholangiogram catheter and guide it into the common bile duct for the injection of the contrast media.

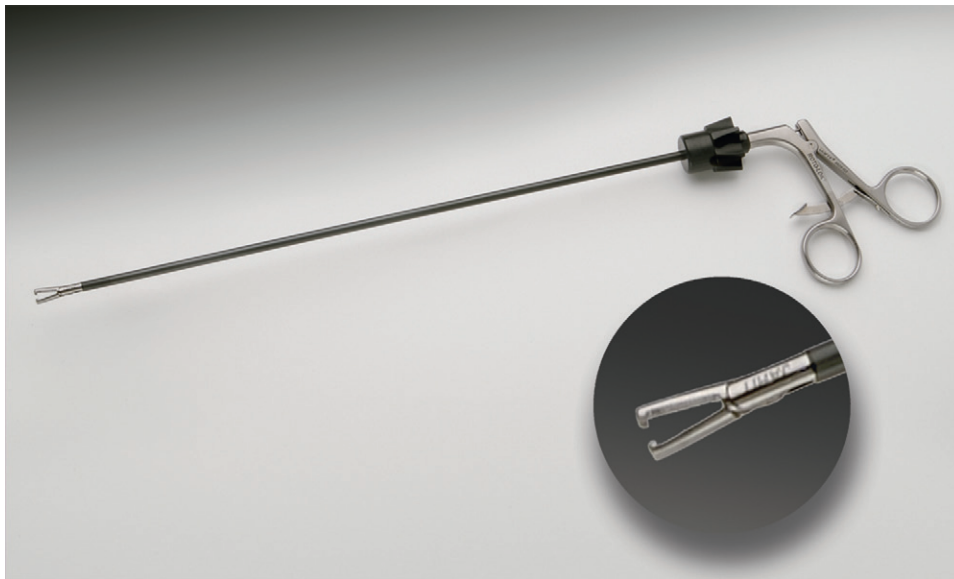
Description: A long grasping forceps with a proximal port, which leads to rounded fenestrated and horizontal serrated jaws.

Instrument Insight: The cholangiogram catheter is fed through the proximal port until the tip extends just beyond the jaws forceps. The forceps is then closed, holding the catheter in place.

**Instrument: ENDOSCOPIC DEBAKEY FORCEPS**

Use(s): Used for grasping of tissues and organs without causing trauma.

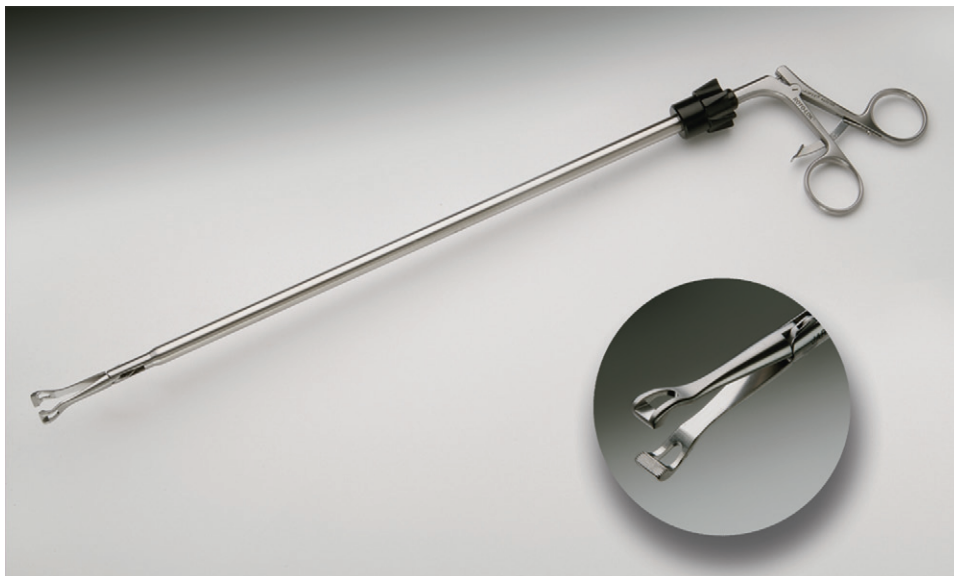
Description: Fenestrated elongated jaws with a blunt tip with two parallel rows of fine serrations running the length of one of the jaws. The other jaw has one row of serrations in the center that interlocks when closed.



Instrument: ENDOSCOPIC ALLIS FORCEPS

Use(s): Lifts, holds, and retracts slippery dense tissue.

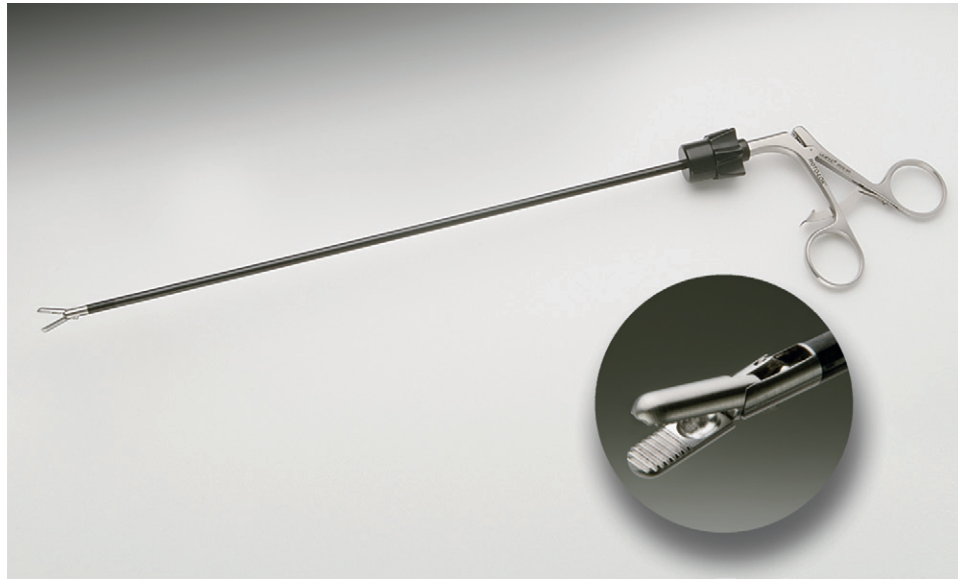
Description: Straight jaws with multiple, intertwining fine teeth at the tip.



Instrument: ENDOSCOPIC BABCOCK FORCEPS

Use(s): Used for grasping and encircling delicate structures such as the ureters, fallopian tubes, ovaries, appendix, or bowel.

Description: Has a flared, rounded end with smooth, flattened tips. Comes in both 5-mm and 10-mm sizes and can be either disposable or nondisposable.

**Instrument: BLUNT GRASPER**

Use(s): Used for grasping and manipulating tissues and organs, causing minimal trauma. These graspers are often used on tissue that is to be removed.

Description: A straight, rounded tip with horizontal serrations and a proximal recess.

**Instrument: CLAW GRASPER**

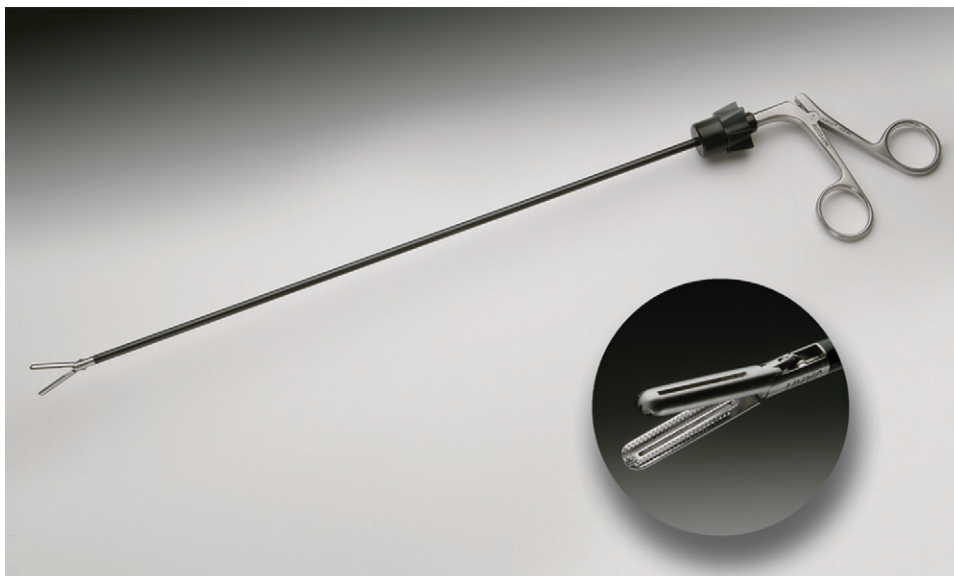
Other Names: Mother-in-law

Use(s): Used for penetrating and holding excised organs and tissues for extraction from the abdominal cavity.

Description: Wide, elongated spring-loaded jaws with 2×3 heavy interlocking teeth.

Instrument Insight: As a general rule, graspers have ratcheted handles, but dissectors do not.

CAUTION: Exercise care when handling penetrating forceps. The sharp tips can easily compromise the integrity of gloves or skin.

**Instrument:** HUNTER BOWEL GRASPER

Use(s): Used for atraumatic grasping and manipulating delicate tissues, such as the bowel and stomach.

Description: Fine, long jaws with rounded tips and DeBakey-style serrations.

PROBING AND DILATING INSTRUMENTS

**Instrument:** XCEL TROCARS

Use(s): Used to create an instrument port in which the endoscope and instruments can be introduced and exchanged through the cannula.

Description: Optic tip bladeless trocar with a universal sealed sheath and a three-way stopcock.

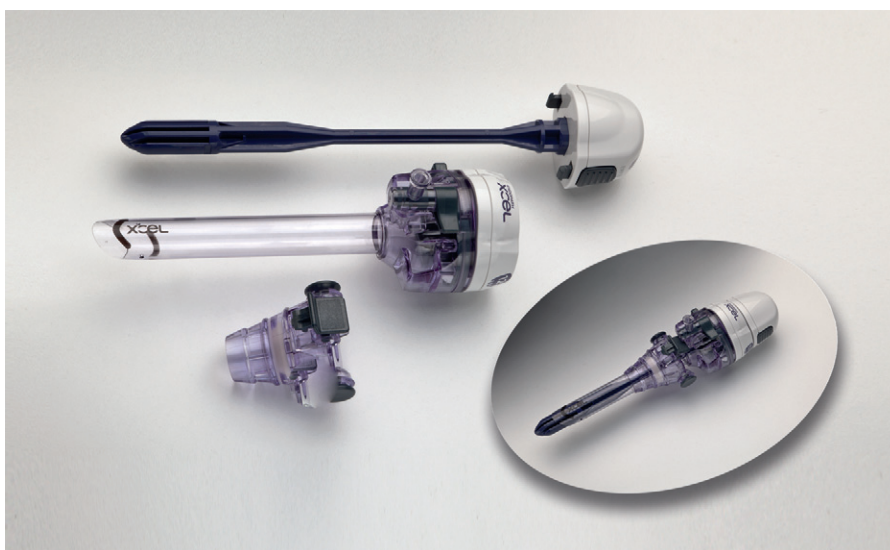
Instrument Insight: After the creation of a pneumoperitoneum, a small skin incision is made at the port site. A downward twisting motion causes the tissue to separate, eliminating the need for the tissue to be cut. The optic tip allows the surgeon to place the laparoscope inside the trocar to view the tissue layer during insertion.

**Instrument: VERSA STEP TROCARS**

Use(s): Used to create an instrument port in which the endoscope and instruments can be introduced and exchanged through the sheath or cannula.

Description: A radial-dilating trocar system, which includes an expandable mesh sleeve, an insufflation/access needle, a blunt-tip fascial obturator and sheath, and a three-way stopcock. Rapid change continues to occur in the development and improvement of trocars. Those pictured represent a few manufacturer variations.

Instrument Insight: After the creation of a pneumoperitoneum, a small skin incision is made at the port site. The expandable mesh sleeve is loaded over the access needle and introduced into the peritoneum. After removing the needle, the blunt-tip obturator loaded into the sheath is passed through the mesh sleeve into the peritoneum. The obturator is removed, and the sheath is left for introduction of instruments.

**Instrument: BLUNT TROCAR**

Other Names: Hasson, Xcel blunt port, blunt tip

Use(s): Placed in a variety of areas but most often at the umbilical site for creation of a pneumoperitoneum; a blunt trocar is often the port used for the laparoscope.

Description: A 5-mm to 12-mm trocar with a blunt obturator, self-sealing sheath or cannula with three-way stopcock, and a grip-anchoring device to secure it in place.

Instrument Insight: The blunt trocar is used for the open or “Hasson” technique. This is accomplished by making a small incision at the umbilical area into the peritoneum. The blunt trocar is then placed and anchored down (usually with suture), and insufflation takes place. This is another technique to first visualize the abdominal cavity before placing a sharp trocar, therefore preventing tissue or organ damage.

RETRACTING AND EXPOSING INSTRUMENTS



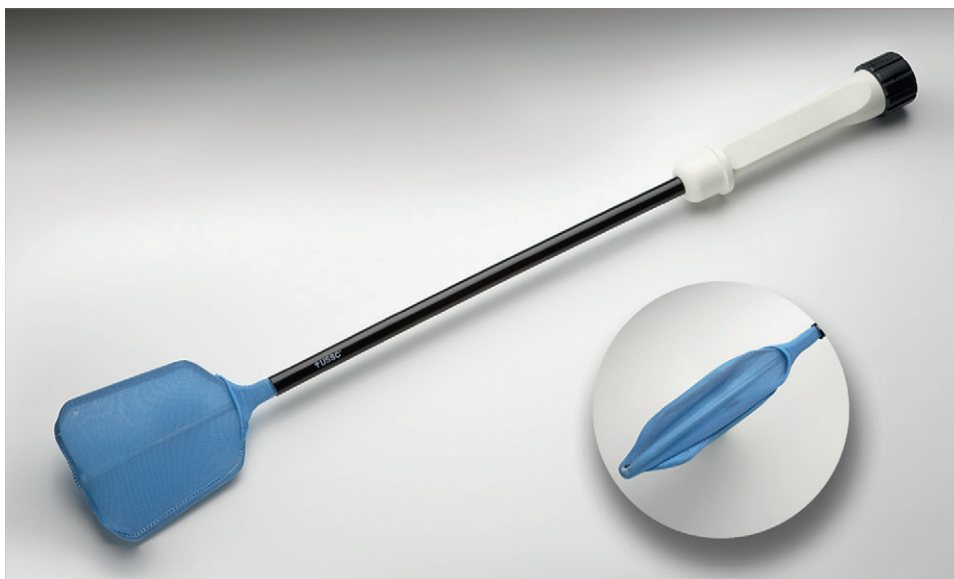
Instrument: ENDO FAN RETRACTOR

Other Names: Fan finger retractor, Peacock retractor

Use(s): Used for elevation, retraction, and mobilization of organs and tissues, providing optimal visualization of the surgical field.

Description: A single-use retractor with three or five telescoping atraumatic blades,

Instrument Insight: The finger blades should be fully closed upon insertion and removal from the cannula. The blades are closed by turning the proximal teal knob counterclockwise and are deployed by turning the knob clockwise.



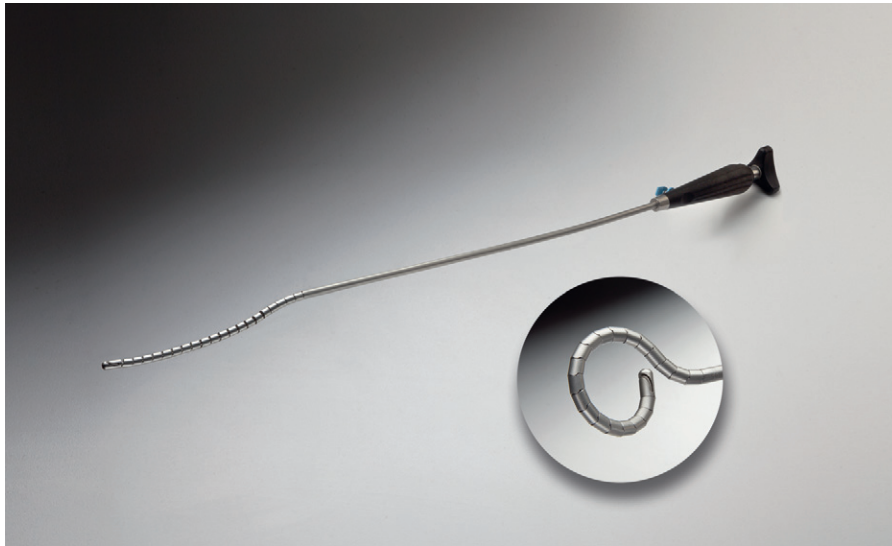
Instrument: ENDO PADDLE RETRACTOR

Use(s): Used for elevation, retraction, and mobilization of organs and tissues, providing optimal visualization of the surgical field.

Description: A single-use retractor with a nylon-covered paddle frame, introducer sheath with seal housing, and black rotation knob.

Instrument Insight: To retract the paddle, turn the rotation knob clockwise until the paddle is fully closed. Push the white seal housing

forward until the paddle is completely housed inside the introducer sheath. Grasp the seal housing, and insert the retractor through the trocar cannula. After it is inserted through the cannula, pull the seal housing back completely, exposing the paddle. Turn the rotation knob counterclockwise to deploy the paddle within the body cavity. The paddle must be fully retracted and housed in the introducer sheath before removal.

**Instrument: ENDOFLEX RETRACTOR**

Other Name: Snake retractor, Diamond-flex

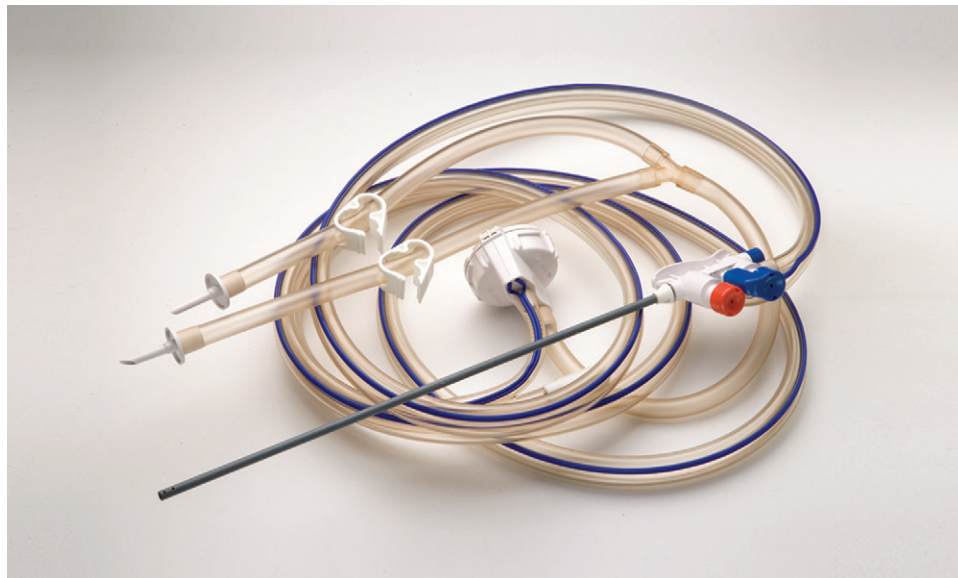
Use(s): Used for elevation, retraction, and mobilization of abdominal organs providing optimal visualization during endoscopic procedures. Commonly used for retraction of the liver in complex upper GI procedures, such as fundoplication and gastric bypass.

Description: The device originates as snake-like, malleable, hollow, 5-mm metal tubes with small individual sections at the working end that are

threaded over internal tension cables that are affixed at the tip. Each individual tubular section is cut obliquely so that when the inner metal cables are tightened by turning the knob on the handle, the retractors conform into its designated shape.

Instrument Insight: Normally, the retractor is inserted loose and flexible through a 5-mm port and articulated after being placed within the abdominal cavity to form the retractor.

SUCTIONING AND ASPIRATING INSTRUMENTS

**Instrument: SUCTION IRRIGATOR**

Use(s): Used to irrigate and aspirate fluid and debris from the surgical site.

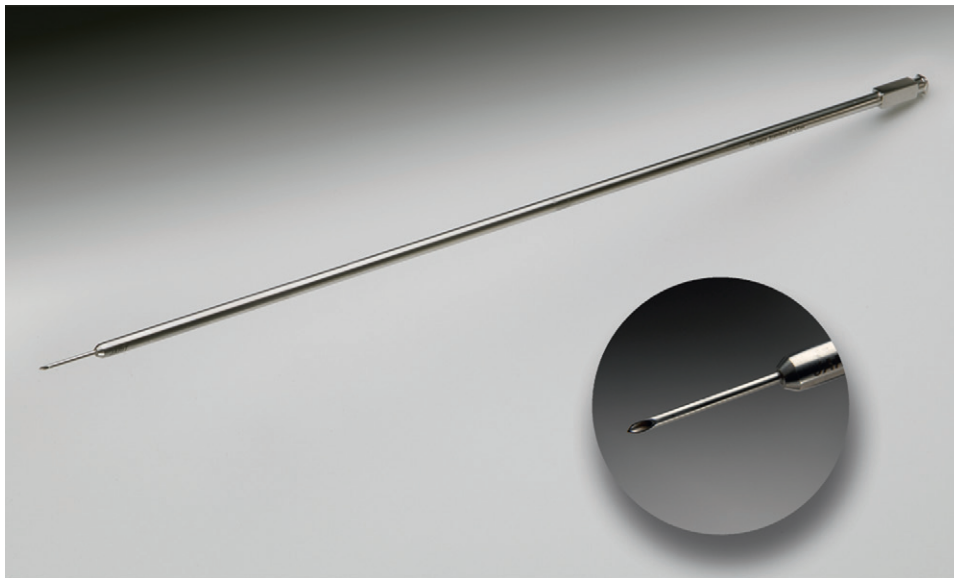
Description: Long, straight, hollow suction tube attached to a combination tubing that has a suction valve and an irrigation valve.

Instrument Insight: There are many types and manufacturers of suction irrigators, such as gravity, pump, or battery operated.

**Instrument: NEZHAT-DORSEY SUCTION TIPS**

Use(s): This suction tip is used for irrigating and aspirating fluid and debris from the surgical site.

Description: A long, hollow suction tip with a bivalve. One is for suction and the other for irrigation.

**Instrument: ENDOSCOPIC ASPIRATING NEEDLE**

Use(s): This needle is used for aspiration of body fluids and cysts.

Description: The proximal end is a Luer-Lok fitting that is attached to a long 5-mm hollow tube with a 19-gauge needle tip.

⚠ CAUTION: The tip should be within the vision of the operator at all times when in the abdominal cavity. The aspiration is accomplished by attaching a syringe or suction.

SUTURING AND STAPLING INSTRUMENTS

Instrument: APPLE NEEDLE HOLDER

Use(s): Used to securely grasp the needle during suturing.

Description: Tapered straight, curved, or angled tip with cross-hatch carbon-bite inner jaws and a

leaf-spring mechanism handle for ease in release and closure.

Instrument Insight: The apple needle holder is designed for grasping 5–0 and smaller needles.

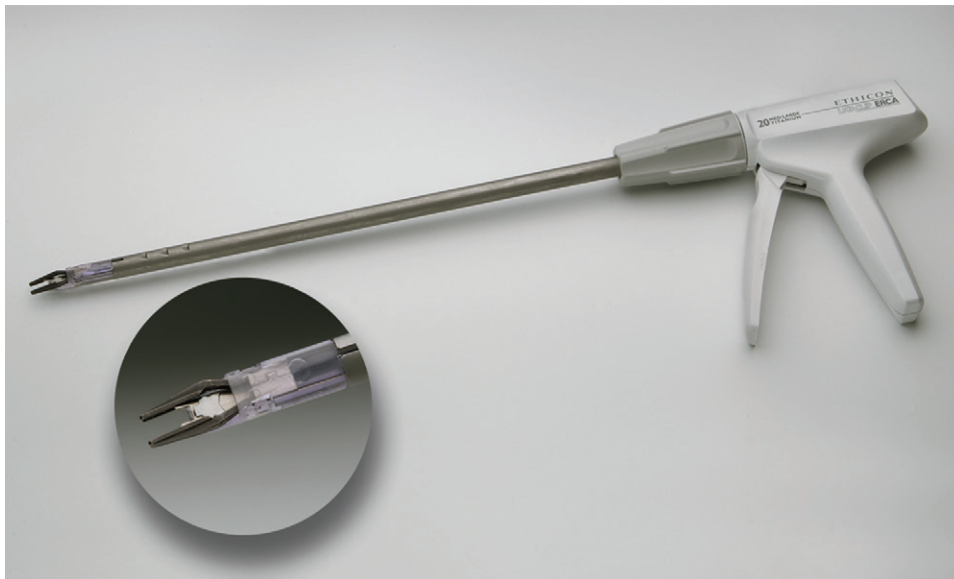


Instrument: KNOT PUSHER

Use(s): Guides knots from outside of the trocar cannula to the suture site. This technique is known as extracorporeal suturing.

Description: A long cylinder rod with a round hole towards the end and a transverse slot at the very tip.

Instrument Insight: The throw of the suture is placed into the open slot and slid into the round hole; it is then guided through the cannula to the suture site, which sets the knot. This action is repeated until the knot is secure.



Instrument: ENDO CLIP APPLIER

Other Names: Hemoclip, clip

Use(s): Used for occluding vessels or other tubular structures.

Description: A sterile, individual patient-use instrument, preloaded with clips. These are manufactured in various titanium clip sizes from 5 mm to 10 mm and different lengths.



Instrument: ENDO GIA STAPLER

Use(s): Often used during laparoscopic appendectomy and gastric and bowel resections. Also used to transect tissues in endoscopic thoracic or gynecological procedures.

Description: A single patient-use, reloadable articulating and rotating stapler that distributes two triple, staggered rows of titanium staples while cutting the tissues between the rows. The length is determined by the tissue to be excised. This stapler is available in 30-mm, 45-mm, and 60-mm sizes.

Instrument Insight: The stapler loads come packaged with a bright-colored plastic safety guard over the row of staples that needs to be removed before handing it to the surgeon. Activation is accomplished by sliding forward the firing knob on the side of the stapler until it stops completely. The manufacturer recommends the stapler can be reloaded up to 25 times for a total of 25 applications.

VIEWING INSTRUMENTS



Instrument: ENDOSCOPIC CAMERA

Use(s): Used for the transmission of images from the rigid or flexible endoscope to the video monitor.

Description: At the distal end of the camera is the coupler that attaches the camera to the eyepiece of the rigid scope. The coupler is attached to the camera head, which provides the image quality. Attached to the camera head is a cord,

which relays the images back to the video system.

Instrument Insight: Most camera failures are related to a damaged cord. Care should be exercised when handling the camera and cord. They should never be placed under a heavy object or dropped, twisted, or kinked. Also keep the distal end covered until it is ready to be plugged into the unit.



Instrument: 10-MM 0° ENDOSCOPE

Other Names: Lens, rigid endoscope

Use(s): Provide visualization of body cavities and content, which may include internal organs and structures, through an orifice or surgical opening.

Description: A rigid, stainless-steel, 10-mm endoscope containing an optical chain of precisely aligned glass lenses and spacers. The objective lens is located at the distal tip of the scope. This determines the viewing angle. The stainless-steel cylinder rod is called the optical element or the telescope, providing both images and light.

The light connector allows attachment of the light cord to the telescope. At the proximal end is the eyepiece or ocular lens; this attaches to the camera coupler, or the surgeon may directly view the cavity.

Instrument Insight: 10 mm indicates the diameter of the scope, and 0° is the forward angle in which the objective lens views. Endoscopes are expensive and fragile. Care should be exercised when handling an endoscope; it should never be picked up by the distal telescope end, placed under heavy objects, or dropped.

**Instrument: 10-MM 30° ENDOSCOPE**

Other Names: Lens, rigid endoscope

Use(s): Used for visualization of body cavities, internal organs, and structures through an orifice or surgical opening.

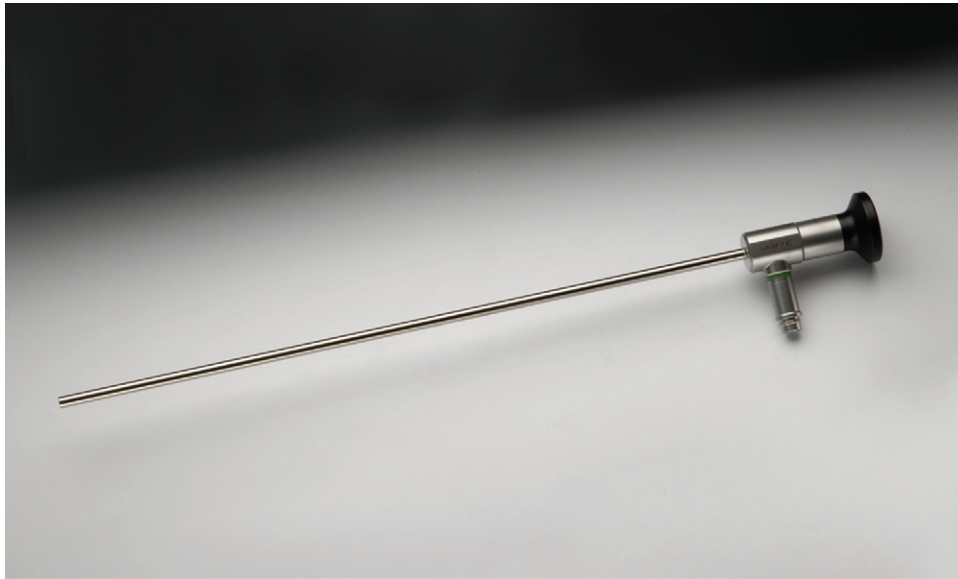
Description: A nonflexible, stainless-steel, 10-mm endoscope containing an optical chain of precisely aligned glass lenses and spacers. The objective lens is located at the distal tip of the scope. This determines the viewing angle. The stainless-steel cylinder rod is called the optical element or the telescope, providing both images and light. The light connector allows

attachment of the light cord to the telescope.

At the proximal end is the eyepiece or ocular lens; this attaches to the camera coupler, or the surgeon may directly view the cavity.

Instrument Insight: 10 mm indicates the diameter of the scope, and 30° is the oblique angle in which the objective lens views.

⚠ CAUTION: Endoscopes are expensive and fragile. Care should be exercised when handling an endoscope; it should never be picked up by the distal telescope end, placed under heavy objects, or dropped.

**Instrument: 5-MM 0° ENDOSCOPE**

Other Names: Lens rigid endoscope

Use(s): Used for visualization of body cavities, internal organs, and structures through an orifice or surgical opening.

Description: A nonflexible, stainless-steel, 5-mm endoscope containing an optical chain of precisely aligned glass lenses and spacers. The objective lens is located at the distal tip of the scope. This determines the viewing angle. The stainless-steel cylinder rod is called the optical element or the telescope, providing both images and light. The light connector allows attachment of the light

cord to the telescope. At the proximal end is the eyepiece or ocular lens; this attaches to the camera coupler, or the surgeon may directly view the cavity.

Instrument Insight: 5 mm indicates the diameter of the scope, and 0° is the forward angle in which the objective lens views.

⚠ CAUTION: Endoscopes are expensive and fragile. Care should be exercised when handling an endoscope; it should never be picked up by the distal telescope end, placed under heavy objects, or dropped.

Robotic Instruments

**Instrument:** *ENDOWRIST*

Use(s): The *EndoWrist* instruments are modeled after the human wrist and fasten to the electro-mechanical arms of the da Vinci System. These instruments offer full range of motion and natural dexterity that represents the surgeon's right and left hand when performing intricate tissue manipulation and dissection through minute ports. The da Vinci System is commonly used for but not limited to gynecological, urological, general, cardiovascular, and otorhinolaryngology specialties.

Description: The *EndoWrist* tips are characterized by instruments that are commonly used by the surgeons in open and minimally invasive surgeries;

these include scissors, forceps, retractors, scalpels, electrocautery, and others that are commonly used devices. These are approximately 5 to 8 mm in diameter and between 49 and 51 cm in length.

Instrument Insight: *EndoWrist* instruments are called "smart disposables" because they are resterilized and reused for a distinct number of procedures. An internal computer chip confirms the manufacturer, the type and function of the instrument, and the number of past uses. The chip will not allow the instrument to be used if it has exceeded the approved number of procedures. This assures proper performance of the instrument during every procedure.

ACCESSORY INSTRUMENTS



Instrument: PERMANENT CAUTERY SPATULA

Other Names: Bovie, cautery

Use(s): Coagulates tissues and maintains hemostasis and aids in blunt dissection.

Description: A monopolar cautery device with a long paddle blade.

Instrument Insight: All of the EndoWrist instruments that have electrosurgical capabilities have an amber colored insulation at the wrist joint.



Instrument: MARYLAND BIPOLAR FORCEPS

Other Names: Bipolar, Maryland

Use(s): Used for grasping, dissecting, and coagulating tissues.

Description: A bipolar device with curved tapered jaws and triangular fenestration at the base.

Instrument Insight: All of the EndoWrist instruments that have electrosurgical capabilities have an amber colored insulation at the wrist joint.

CUTTING AND DISSECTING INSTRUMENTS



Instrument: CURVED SCISSORS

Other Names: Shears

Use(s): Used for precision cutting and sharp and blunt dissection of tissue.

Description: Curved, beveled blades with tapered atraumatic tips.



Instrument: POTTS SCISSORS

Use(s): Used for the creation of an arteriotomy for coronary anastomosis.

Description: Straight, fine, tapered, beveled blades.



Instrument: PK DISSECTING FORCEPS

Other Names: PK

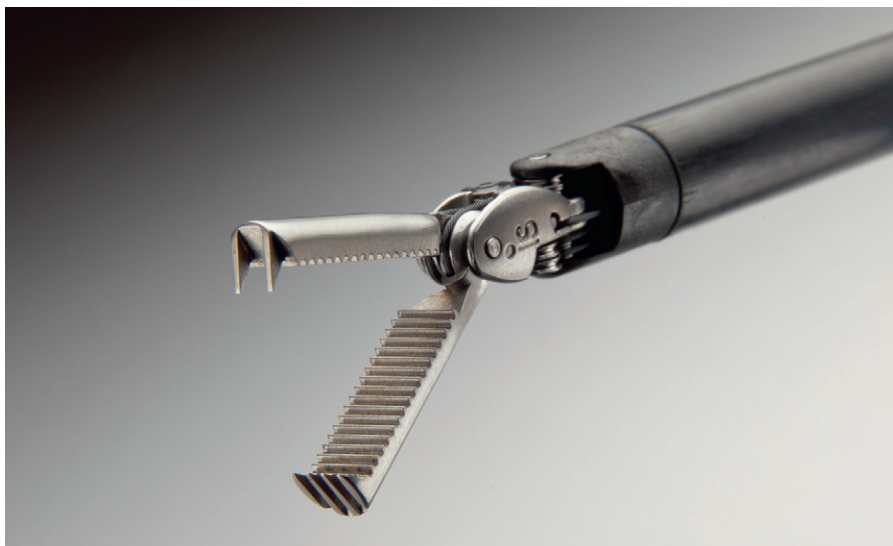
Use(s): This is used for grasping, coagulating, and cutting tissues.

Description: The PK has curved and tapering outer jaws with horizontal serration that runs the length of the inner jaws.

Instrument Insight: The PK provides radiofrequency energy to seal, transect, and mobilize tissues at low temperature, which minimizes tissue sticking, charring, and plume.

All of the EndoWrist instruments that have electrosurgical capabilities have amber colored insulation at the wrist joint.

GRASPING AND HOLDING INSTRUMENTS



Instrument: COBRA GRASPER

Other Names: Biter, Toothed grasper, Cobra

Use(s): The cobra is used for grasping and retracting dense tissues. Commonly used for grasping the pelvic fascial layers during cuff closure in a hysterectomy.

Description: Straight jaws with horizontal serration running the length. At the tip, one jaw has two sharp teeth and the other has four, and when closed they interlock.

**Instrument: DEBAKEY FORCEPS**

Use(s): Facilitates atraumatic tissue handling.

Description: Straight smooth forceps with an elongated, narrowed blunt tip. A set of parallel fine serrations runs the length of one jaw with a center row of serrations on the opposite side that interlocks to grip when closed.

Instrument Insight: Considered a vascular tissue forceps, but commonly used in all specialty areas because of its ability to securely grip without causing damage to tissues.

**Instrument: RESANO FORCEPS**

Other Names: Shark forceps

Use(s): Facilitates firm but atraumatic handling of valve and arterial tissues.

Description: Smooth, straight outer jaws with blunt triangular serration that interlock when closed.



Instrument: PROGRASP™ FORCEPS

Other Names: Delicate Grasper, Fenestrated

Use(s): Used to grasp and retract delicate tissues. Commonly used to grasp and retract bowel during abdominal procedures.

Description: Smooth, flattened wide outer jaws with an oval fenestration in the middle and horizontal serration running the length of the inner jaws.

RETRACTING AND EXPOSING INSTRUMENTS



Instrument: ARTERIAL RETRACTOR

Other Names: Fan retractor, finger retractor

Use(s): The arterial retractor provides exposure of the mitral valve and atrial retraction. Often used during a mitral valve repair.

Description: Two straight atraumatic blades with a slight curve at the end.

Instrument Insight: The two blades of the arterial retractor draw in on one another to resemble one blade, which facilitates insertion in a tiny port.

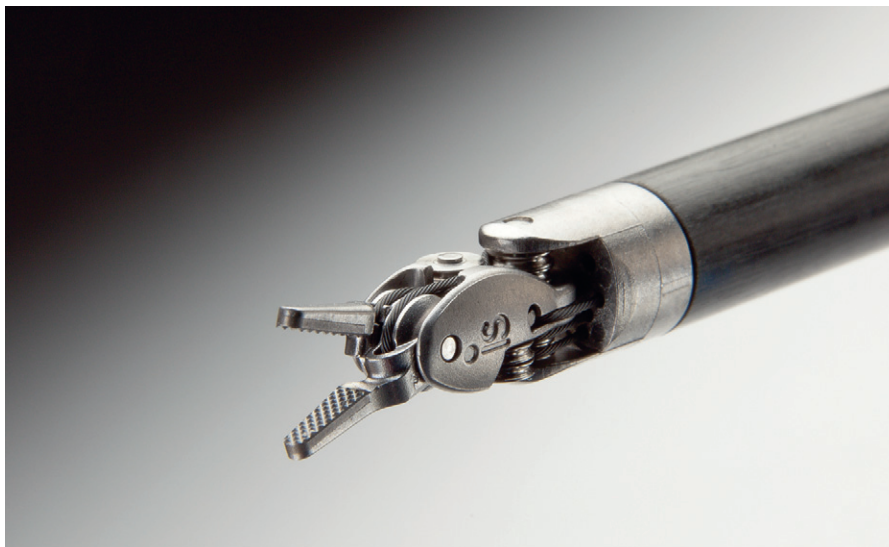
SUTURING AND STAPLING INSTRUMENTS

**Instrument:** SUTURECUT NEEDLE DRIVER

Use(s): Used for grasping needles and cutting suture. Often used when placing interrupted suture; also used when closing the vaginal cuff during a hysterectomy.

Description: Tapered, smooth outer jaws with cross-hatch serration on the inner and scissor blades at the base.

Instrument Insight: Suturing and cutting with one instrument reduces instrument exchange and saves time.

**Instrument:** LARGE NEEDLE DRIVER

Other Names: Large needle holder

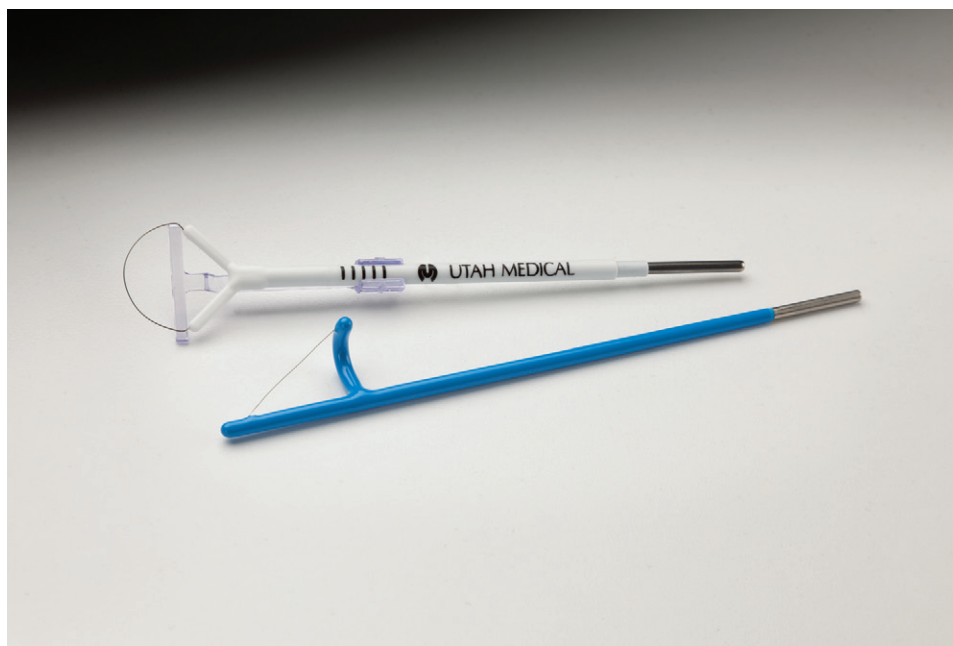
Use(s): Used for securing the needle while suturing tissues.

Description: A straight, smooth, tapering outer jaw with diamond pattern carbide inserts in the inner jaw.

Instrument Insight: The carbide inserts give the needle holder better gripping properties to secure the needle.

Obstetrics and Gynecologic Instruments

ACCESSORY INSTRUMENTS



Instrument: LEEP LOOP ELECTRODE

Other Names: Loop

Use(s): Used for removing abnormal cervical cells electrosurgically for further pathological examination.

Description: This procedure is often called a hot cone biopsy. Most loops have an insulated shaft

and crossbar to prevent accidental thermal injury with a stainless steel or tungsten wire of the loop that is approximately 0.2 mm thick.

Instrument Insight: The size and shape of the loop will be determined by the amount of cervical dysplasia and surgeon preference.

CLAMPING AND OCCLUDING INSTRUMENTS



Instrument: HEANEY HYSTERECTOMY FORCEPS

Other Names: Hyster clamps

Use(s): Used for clamping vessels and uterine ligaments during a hysterectomy.

Description: A heavy clamp with horizontal serrations running the length of the jaws and with a single tooth on the inner jaws.

Instrument Insight: The tooth or teeth are not sharp but provide greater gripping capabilities.



Instrument: HEANEY-BALLENTINE HYSTERECTOMY FORCEPS

Other Names: Heaney clamp, Masterson

Use(s): Used for clamping vessels and ligaments during a hysterectomy.

Description: A heavy clamp with vertical serrations running the length of the jaws and with a

single or double tooth on the inner jaws; can have either straight or curved jaws.

Instrument Insight: The tooth or teeth are not sharp but provide greater gripping capabilities.

**Instrument: CORD CLAMP**

Use(s): The cord clamp is used to clamp the cord of the neonate; the cord remains attached to the newborn following separation from the placenta.

Description: A plastic disposable clamp with horizontal serrations running the length of the jaws.

Instrument Insight: The cord clamp is a single-use device and should not be closed before use because this can damage its reliability.

CUTTING AND DISSECTING INSTRUMENTS

**Instrument: THOMAS UTERINE CURETTE**

Other Names: Blunt curette

Use(s): Used for bluntly removing uterine contents after sharp curetting.

Description: A hollow grip handle that extends to a malleable shaft and a blunt looped tip.



Instrument: SIMS UTERINE CURETTE

Other Names: Sharp curettes

Use(s): Used for scraping the endocervical and endometrial lining of the uterus during a dilation and curettage (D&C) procedure.

Description: A hollow grip handle that extends to a malleable shaft and a sharp looped tip.

Instrument Insight: The shaft is malleable so that the surgeon can bend it to the angle needed to scrape the uterus.

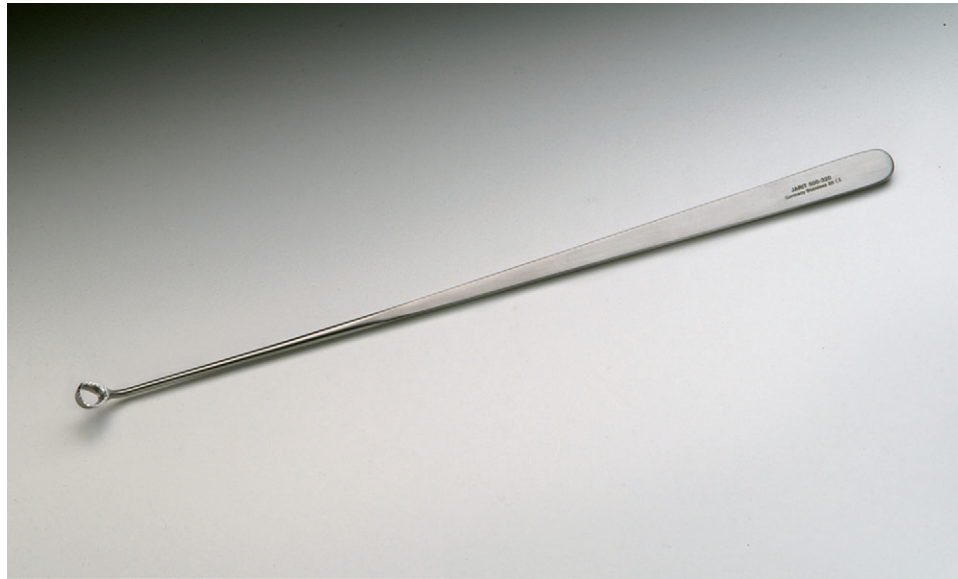


Instrument: KEVORKIAN ENDOCERVICAL CURETTE

Other Names: Endocervical curette, box curette

Use(s): Used for obtaining cervical scrapings or biopsies.

Description: A grip handle that extends to a narrow and sharp rectangular tip.



Instrument: HEANEY UTERINE BIOPSY CURETTE

Use(s): Used for obtaining uterine scrapings.

Description: A flattened handle that extends to a sharp, serrated looped tip.

CAUTION: The serrations are sharp and can easily compromise the integrity of your gloves, skin and those of the surgeon.



Instrument: MAYO UTERINE SCISSORS

Other Names: Uterine scissors

Use(s): Used for cutting the heavy uterine ligaments and vessels during a total abdominal hysterectomy.

Description: Long heavy scissors with curved or straight blades. The straight blades are usually used for cutting suture and the curved blades for cutting tissue.



Instrument: THOMAS-GAYLOR UTERINE BIOPSY FORCEPS

Other Names: Gaylor punch

Use(s): Used for taking small bites of uterine tissue for examination.

Description: A ringed instrument with a curved cup tip. The cup tips are sharp, and as they are closed they bite into tissues.



Instrument: LONG ANGLED #3 KNIFE HANDLE

Other Names: Cold cone knife

Use(s): Used for removing abnormal cervical tissues during a cold conization of the cervix.

Description: A long #3 handle that is angled at the blade end.

Instrument Insight: Generally for a conization procedure, the handle is loaded with a #11 blade.



Instrument: GYNECARE MORCELLEX

Other Names: Morcellator

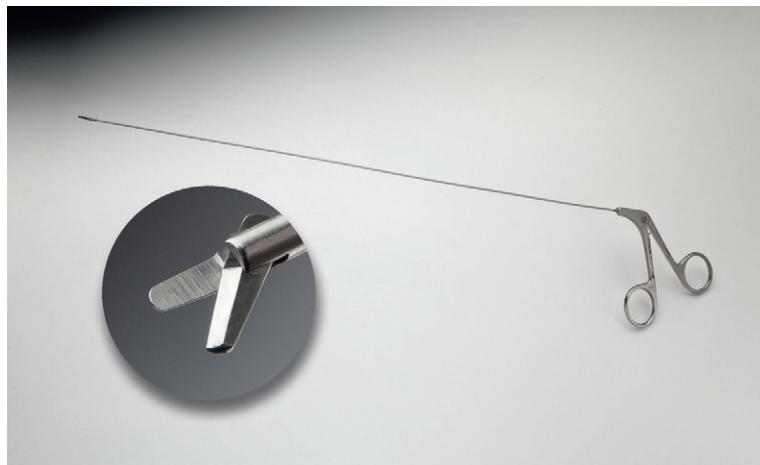
Use(s): The Morcellex is used for cutting, coring, and extracting the uterus and other tissues through a port during a laparoscopic supracervical hysterectomy.

Description: A single patient use device that is packaged with multiple components these are assembled progressively during use. The components are a blade housing assembly, obturator, reducer cap, and detachable handle with attached drive cord. When assembled the device resembles a gun.

Instrument Insight: The steps for assembling the Morcellex: The obturator is inserted into the central lumen of the blade housing assembly. Align the latches and apply pressure until an

audible “click” is heard. The assembly will then be inserted under direct visualization through an incision. The obturator is removed by squeezing the latches and pulling it out from the central lumen. The blade housing assembly may be used as an instrument port until the time of tissue morcellation. When morcellation is required, slide the detachable handle into the grooves on the blade housing assembly until it seats firmly. The cord and air tube will be attached to the drive unit. The Morcellex can be activated via foot pedal or by the use of the trigger on the handle based on surgeon’s preference.

CAUTION: Do not press the activation trigger during handle attachment.



Instrument: HYSTEROSCOPE SCISSORS

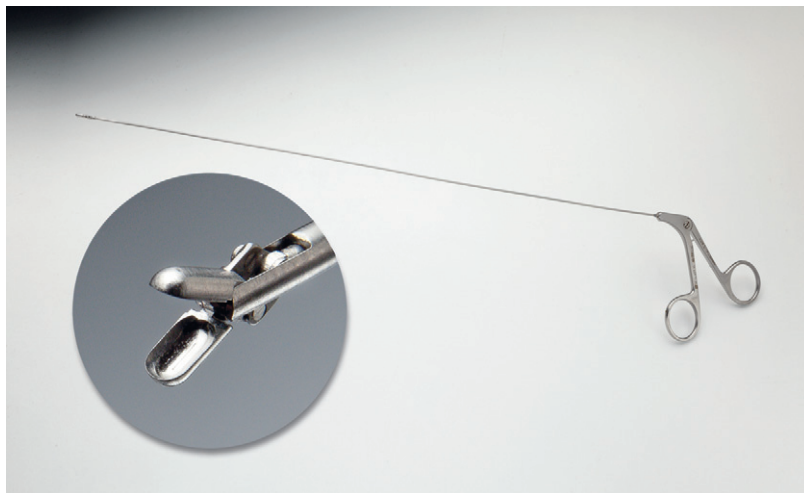
Other Names: Hysteroscopic scissors

Use(s): Used for excising tissues and taking biopsies from internal uterus through the hysteroscope.

Description: These scissors have right-angle finger rings at the proximal end that lead to a long flexible wire that turns into straight scissor

blades on the distal end. These are very small and will fit through the working channel on the hysteroscope.

Instrument Insight: These are delicate and should be handled with care; the wire portion should not be kinked, and heavy items should never be placed on top of them.



Instrument: HYSTEROSCOPE BIOPSY FORCEPS

Other Names: Biopsy forceps

Use(s): Used for excising tissues and taking biopsies from internal uterus through the hysteroscope.

Description: These forceps have right-angle finger rings at the proximal end that lead to a

long flexible wire that turns into a rounded sharp-cup forceps on the distal end. These are very small and will fit through the working channel on the hysteroscope.

Instrument Insight: These are delicate and should be handled with care; the wire portion should not be kinked, and heavy items should never be placed on top of them.

GRASPING AND HOLDING INSTRUMENTS



Instrument: JACOBS VULSELLUM

Other Names: Vulsellum, Jacobs uterine forceps, Jacobs tenaculum

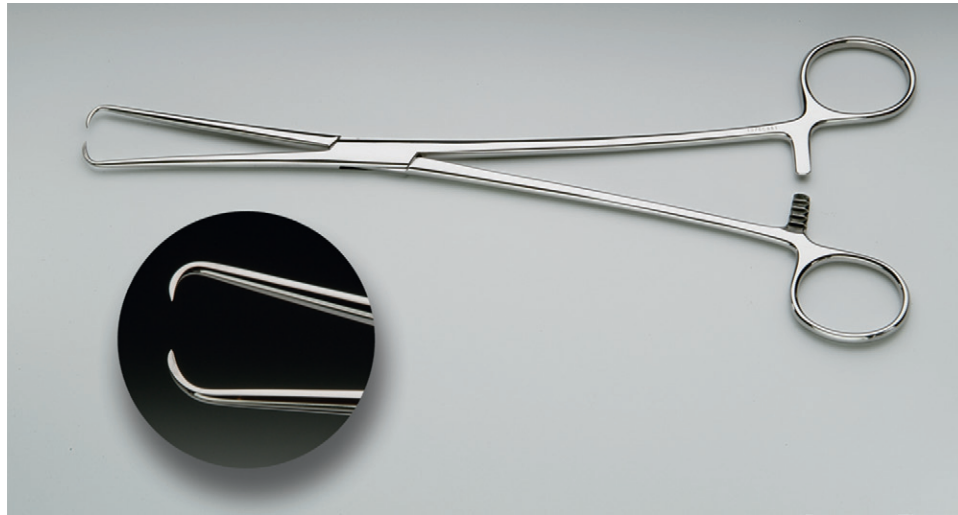
Use(s): Used for grasping the anterior lip of the cervix for manipulation. The sharp teeth penetrate the fibrous tissue for greater control. Commonly used during vaginal procedures such as D&C or vaginal hysterectomy.

Description: A curved or straight heavy forceps with a flat, squared tip. Each inner jaw contains two heavy sharp teeth at the outer edge that interlock over each other when compressed.

Horizontal serrations extend from the teeth to approximately one fourth of the way down the inner jaw.

Instrument Insight: Because of penetration of the tissue, after removal of the forceps the site should be assessed for bleeding. Hemostasis can be achieved with silver nitrate sticks, cautery, or Monsel solution.

CAUTION: Care should be taken when handling this instrument because the sharp teeth can easily puncture gloves and/or skin.

**Instrument: SCHROEDER TENACULUM**

Other Names: Single-tooth tenaculum, Braun tenaculum

Use(s): Used for grasping the anterior lip of the cervix for manipulation. The sharp prongs on each jaw penetrate the fibrous tissue for greater control. Commonly used during vaginal procedures such as D&C, vaginal hysterectomy, or abdominal hysterectomy.

Description: Smooth round jaws that extend to sharp, inward-curved prongs.

Instrument Insight: Because of penetration of the tissue, after removal of the forceps the site should be assessed for bleeding. Hemostasis can be achieved with silver nitrate sticks, cautery, or Monsel solution.

CAUTION: Care should be taken when handling this instrument because the sharp prongs can easily puncture gloves and/or skin.

**Instrument: SCHROEDER UTERINE VULSELLUM**

Other Names: Double-tooth tenaculum

Use(s): Used for grasping the anterior lip of the cervix for manipulation. The sharp prongs on each jaw penetrate the fibrous tissue for greater control. Commonly used during vaginal procedures such as D&C or vaginal hysterectomy.

Description: Curved or straight forceps with smooth, round jaws that bifurcate into two sharp, cupped prongs.

Instrument Insight: Because of penetration of the tissue, after removal of the forceps the site should be assessed for bleeding. Hemostasis can be achieved with silver nitrate sticks, cautery, or Monsel solution.

CAUTION: Care should be taken when handling this instrument because the sharp prongs can easily puncture gloves and/or skin.

**Instrument: HULKA TENACULUM****Other Names:** Uterine manipulator**Use(s):** Used to manipulate the uterus and thereby facilitate visualization of and access to pelvic structures during laparoscopic procedures. The probe tip is inserted into the cervical os and the sharp prong penetrates the anterior cervical lip.**Description:** One of the jaws has a long ball-tip probe extending to heavy horizontal serrations.

The other side is shorter and has smooth, round jaws that extend to a sharp, inward-curved prong. The heavy serrations and the curved prong interlock when compressed.

⚠ CAUTION: Care should be taken when handling this instrument because of the sharp prong that can easily puncture gloves and skin.

**Instrument: ALLIS-ADAIR****Other Names:** Big Allis**Use(s):** Used for lifting, holding, and retracting slippery dense tissue that is being removed. In OB/GYN procedures, it is commonly used to grasp vaginal tissue during an anterior and posterior repair.

Description: Wide heavy tip with multiple, interlocking fine teeth at the tip that reduce injury to the tissues. The jaws are much wider and heavier than a regular Allis.

Instrument Insight: Will often need multiple forceps to grasp the excess tissue in A&P repair.



Instrument: CURVED OCHSNER FORCEPS

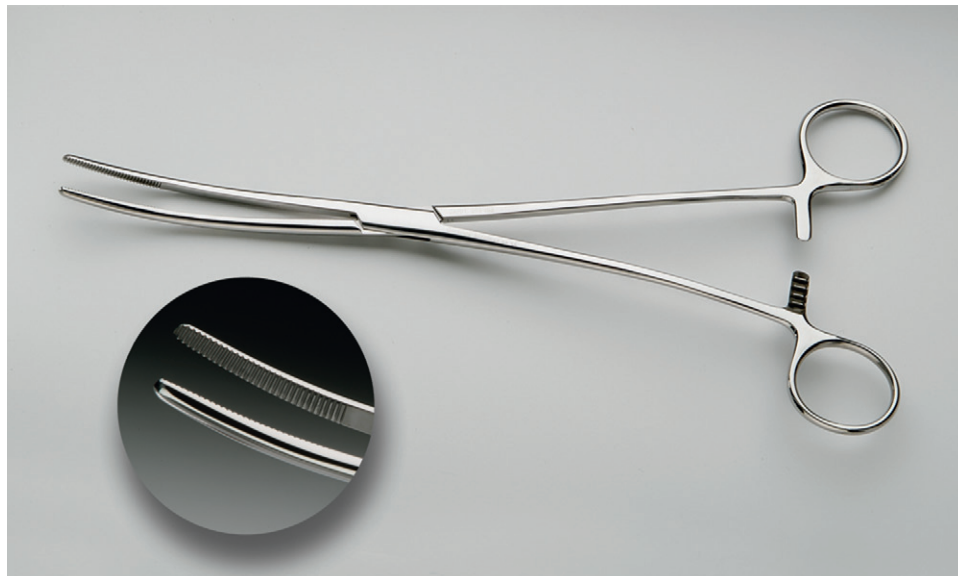
Other Names: Curved Kocher

Use(s): Used for grasping tough, fibrous, slippery tissues.

Description: The curved inner jaws have transverse serrations that run the length of the jaws. At the tip of the jaws are three large interlinking

teeth. This instrument is available with both straight and curved jaws.

⚠ CAUTION: Care should be taken when handling this instrument because the sharp teeth can easily puncture gloves and skin.



Instrument: BOZEMAN UTERINE DRESSING FORCEPS

Other Names: Dressing forceps, packing forceps

Use(s): Used for placing vaginal packing in the vagina after vaginal procedures.

Description: Long curved forceps with horizontal serrations running one fourth of the way down the inner jaws.



Instrument: OVERSTREET ENDOMETRIAL POLYP FORCEPS

Other Names: Polyp forceps

Use(s): Used for removal of endometrial polyps and other intrauterine tissue.

Description: Curved or straight forceps with two fenestrated, oval-cupped tips.



Instrument: SIMPSON OBSTETRICAL FORCEPS

Other Names: Tongs, forceps

Use(s): Used for facilitating fetal descent and delivery when the fetus is lodged in the birth canal. The blades are placed properly around the fetal head, and pulling the handle will aid in fetal descent.

Description: Two large, curved, teardrop-shaped blades that extend into two shafts that interlock at the handle. The interlocking handle is not fixed; therefore the two sides can be completely separated for ease in placement.



Instrument: HYSTEROSCOPE GRASPING FORCEPS

Other Names: Graspers

Use(s): Used for grasping tissues in the internal uterus when excising or taking biopsies through the hysteroscope.

Description: These graspers have right angle finger rings at the proximal end that lead to a

long flexible wire that turns into a rounded tip forceps with multiple interlocking teeth on the distal end. These are very small and will fit through the working channel on the hysteroscope.

Instrument Insight: These are delicate and should be handled with care; the wire portion should not be kinked, and heavy items should never be placed on top of them.

PROBING AND DILATING INSTRUMENTS



Instrument: HANK DILATORS

Other Names: Uterine dilators, cervical dilators

Use(s): Used for progressive dilation of the cervical os for intrauterine procedures, such as dilatation and curettage (D&C), suction and curettage (S&C), dilatation and evacuation (D&E), or hysteroscopy.

Description: Double-ended probe with an elevated cuff designed to limit uterine penetration.

Hank dilators are sized from 9–10 French to 19–20 French with one end of the dilator larger than the other.

Instrument Insight: Arrange dilators in a line from smallest to largest on the back table. Place the middle of the dilator in the surgeon's hand like a pencil with the smaller end facing the field.

**Instrument: HEGAR DILATORS**

Other Names: Uterine dilators, cervical dilators

Use(s): Used for progressive dilation of the cervical os for intrauterine procedures, such as D&C, S&C, D&E, or hysteroscopy.

Description: Double-ended heavy probe; sized from 1–2 mm to 17–18 mm with one end of the dilator larger than the other.

Instrument Insight: Arrange dilators in a line from smallest to largest on the back table. Place the middle of the dilator in the surgeon's hand like a pencil with the smaller end facing the field.

**Instrument: PRATT UTERINE DILATORS**

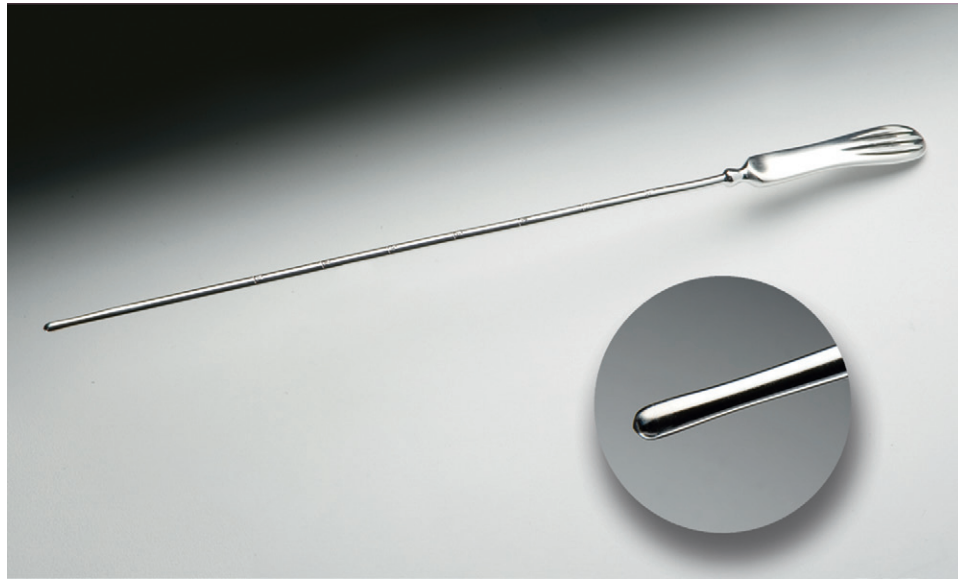
Other Names: Uterine dilators, cervical dilators

Use(s): Used for progressive dilation of the cervical os for intrauterine procedures, such as D&C, S&C, or hysteroscopy.

Description: Double-ended probe that graduates up by 2 French from 13–15 French to 41–43

French with one end of the dilator larger than the other.

Instrument Insight: Arrange dilators in a line from smallest to largest on the back table. Place the middle of the dilator in the surgeon's hand like a pencil with the smaller end facing the field.



Instrument: SIMS UTERINE SOUND

Other Names: Sound, depth gauge

Use(s): This instrument is inserted into the cervical os to measure the depth of the uterus from the cervix to the back of the uterus or the

fundus. The purpose for measuring the uterus is to prevent perforation of the uterus while curetting of the endometrial lining during a D&C.

Description: A long narrow probe that is malleable and is calibrated in inches or centimeters.

RETRACTING AND EXPOSING INSTRUMENTS



Instrument: AUVARD WEIGHTED VAGINAL SPECULUM

Other Names: Weighted speculum

Use(s): Used for retraction of the posterior vaginal wall. The blade is placed into the vaginal vault, and the weight of the speculum allows it to hang in place.

Description: A self-retaining retractor with angled concave blades that extend to a widened

oblong lip. From this lip, there is a concave channel that leads to the bottom. At approximately two thirds of the way down the channel is the round weighted ball.

Instrument Insight: The average weight of this retractor is 2.5 pounds. A sterile glove may be placed over the bottom of the retractor to catch any fluid.



Instrument: GRAVES VAGINAL SPECULUM

Other Names: Duckbill, Bivalve Speculum

Use(s): Used for retraction of the anterior and posterior vaginal walls.

Description: Self-retaining retractor with inner upper and lower concave blades that are held open by a nut screw mechanism.

Instrument Insight: This speculum is available in different sizes; the size to be used is determined by the size of the patient.



Instrument: O'SULLIVAN-O'CONNOR RETRACTOR

Other Names: Irish, O'Sullivan, O'Connor

Use(s): Used for retraction of the abdominal wall during open abdominal and pelvic procedures.

Description: A ring frame self-retaining retractor with attached lateral blades and interchangeable upper and lower blades.

Instrument Insight: Each individual piece of the retractor is included separately as part of the count.



Instrument: HEANEY RETRACTOR

Other Names: Lateral retractor, right angle retractor

Use(s): Used for retraction of the anterior vaginal wall.

Description: A 90° angle flat blade that extends to a curved hook on the handle end.

Instrument Insight: The retractor is placed in the palm of the hand with the hook up and over the top of the hand for easier holding.



Instrument: EASTMAN RETRACTOR

Other Names: Lateral retractor

Use(s): Used for retracting the anterior vaginal wall.

Description: Has a hook-end handle that extends to a widened, lateral, right-angle blade

that is slightly concave with a downward bent, crescent-shaped lip.

Instrument Insight: The retractor is placed in the palm of the hand with the hook up and over the top of the hand for easier holding.



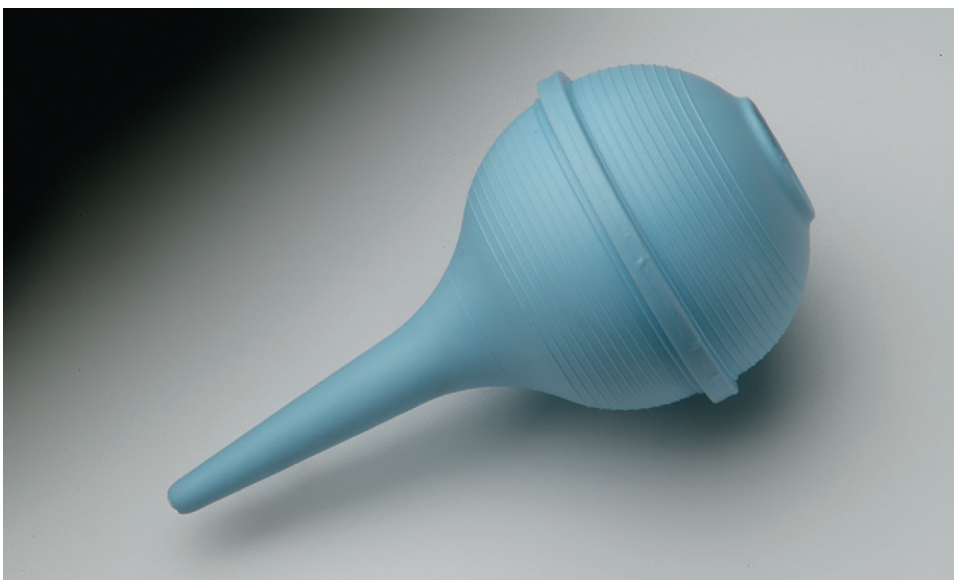
Instrument: BABY DEAVER RETRACTOR

Other Names: Small Deaver

Use(s): Used for retraction of the anterior vaginal wall. Also used for pediatric abdominal procedures.

Description: A flat, narrow, stainless-steel strip that resembles a question mark.

SUCTIONING AND ASPIRATING INSTRUMENTS



Instrument: BULB SYRINGE

Other Names: Baby sucker, ear syringe

Use(s): Used for aspiration of mucus and fluid from the mouth and nose of a neonate.

Description: A disposable, pliable hollow bulb that extends to a soft pliable tube.

Instrument Insight: Have readily available upon birth of a neonate.



Instrument: DELEE SUCTION

Other Names: Mucous trap

Use(s): Used for aspiration of mucus and fluid from the mouth, nose, and throat of a neonate during a cesarean delivery.

Description: An oral or mechanical suction device with a 20-mL canister that has a mucous trap and filter. This prevents the mucus or fluid from entering the baby's mouth. On the canister

lid is a 10F flexible suction catheter and a suction tube.

Instrument Insight: This should be immediately available upon delivery of the fetal head.

CAUTION: Do not hook the suction device to a regulator on full suction because this would be too strong.

SUTURING AND STAPLING INSTRUMENTS



Instrument: HEANEY NEEDLE HOLDER

Other Names: Curved needle holder, Heany needle driver, Curved needle driver

Use(s): Used for proper placement of a suture needle when suturing around curved structures and in confined spaces, such as during a vaginal hysterectomy.

Description: A curved heavy needle holder with a carbide cross-hatch pattern of serrations on the inner jaws.

Instrument Insight: The needle should be positioned on the jaws of the needle holder with its curve toward the swaged end of the suture.

VIEWING INSTRUMENTS

**Instrument: HYSTEROSCOPE**

Use(s): Hysteroscope is a sheath and telescope that is inserted into the uterus via the vagina and cervix to visualize the internal structures of the uterus and the tubal orifices, endocervical canal, cervix, and vagina. Hysteroscopy can be performed for diagnostic or therapeutic indications.

Description: The hysteroscope consists of a telescope lens, outer sheath, and an inner sheath. The outer is a hollow metal tube with a stopcock on the side for the inflow of irrigation at the proximal end and a rounded angled tip at the distal end. The inner sheath is a smaller hollow tube that at the proximal end accepts

the telescope lens. It also has a stopcock on the side for the inflow of irrigation and a working channel on the other side in which instruments are inserted. The working channel is fitted with a reducer cap to prevent fluid from leaking out during insertion and removal of instruments.

Instrument Insight: The stopcocks should be closed before irrigation is opened. If the handle of the stopcock is aligned with the port, the stopcock is open. If the handle is up or down, the stopcock is closed. The port on the working channel should have a reducer cap and the stopcock closed to control the leakage of irrigation.

Genitourinary Instruments

ACCESSORY INSTRUMENTS



Instrument: FIBEROPTIC LIGHT CORD

Other Names: Light cord

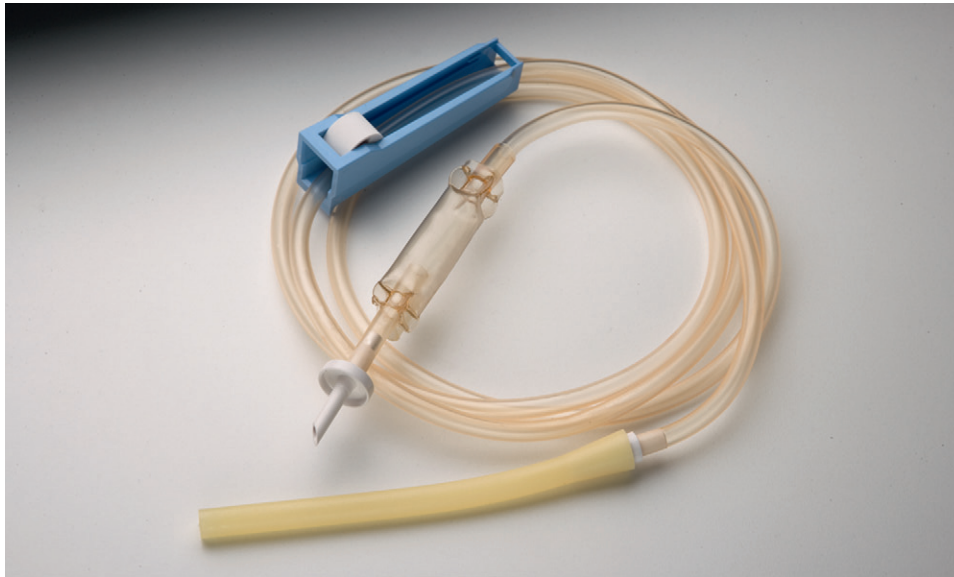
Use(s): Used for delivering high-intensity light to the endoscope for illumination of the interior bladder.

Description: A 10-foot fiberoptic cable with an endoscope adaptor at the proximal end and a light source adaptor at the distal end.

Instrument Insight: Care must be exercised when handling a fiberoptic cord. It should never

be placed under a heavy object, dropped, twisted, or kinked; the tiny glass fibers inside can be easily damaged.

⚠ CAUTION: When not in use, the light source should be turned off. The intense beam can cause ignition of the drapes or any flammable vapors; it can also burn through the drapes and injure the patient.

**Instrument: IRRIGATION TUBING****Other Names:** Water Tubing**Use(s):** Used for instillation of irrigation fluids into the urinary bladder, causing distention. Used for visualizing the interior. This is done during endoscopic urological procedures.**Description:** Clear synthetic tubing with a spike, a drip chamber, and a roller clamp at the distal

end and flexible rubber tubing on the working end.

Instrument Insight: The spike end of the tubing is handed off the sterile field. A Luer-Lok adaptor is often attached to the rubber end of tubing for connection to the scopes.**Instrument: REDUCER CAPS****Other Names:** Seals**Use(s):** Reduce leakage of irrigation when inserting a device into the working channels of bridges, the catheter-deflecting element, and flexible scopes.**Description:** Reusable flexible caps with a small hole on the working end. Reducers are available in different sizes depending on the size of the device to be used.**Instrument Insight:** The seals are stretched over the opening of the working channels.

**Instrument: TELESCOPE BRIDGE****Other Names:** Bridge**Use(s):** Used to adapt the telescope lens to fit into the cystoscope sheath and may allow insertion of one or two accessories. These would include guidewires, ureteral catheters, stents, and other flexible devices.**Description:** The proximal end accepts the telescope and has a working channel on each side. The distal end is the connection to the cystoscope

sheath. Bridges are available in several styles. They can be an adaptor only or be manufactured with one or two working ports.

Instrument Insight: The lens will not fit into the cystoscope sheath without a bridge. The ports on bridges are covered with a reducer cap and have stopcocks to control the leakage of irrigation. If the handle of the stopcock is aligned with the port, the stopcock is open. If the handle is up or down, the stopcock is closed.

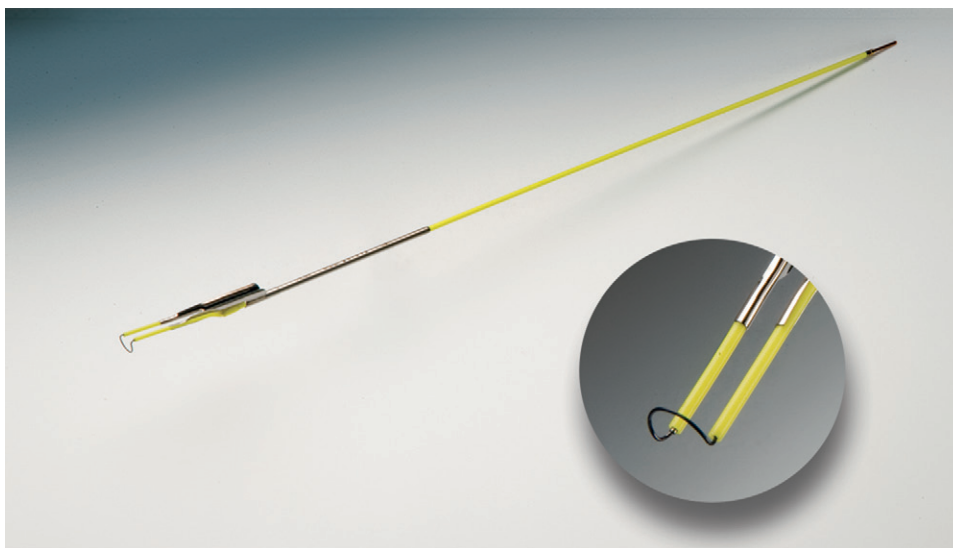
**Instrument: CATHETER DEFLECTING ELEMENT****Other Names:** Cath element, deflecting bridge**Use(s):** This device allows the surgeon to aim the tip of the accessory at a specific area or anatomical structure. A deflecting element is commonly used during a cystoscopy for retrograde pyelograms to direct the catheter into the ureteral orifice.**Description:** The proximal end accepts the telescope lens, which is slid through the hollow tube to the end for viewing. There are working channels on each side in which the ureteral catheter is inserted. Below the channels are thumb wheels

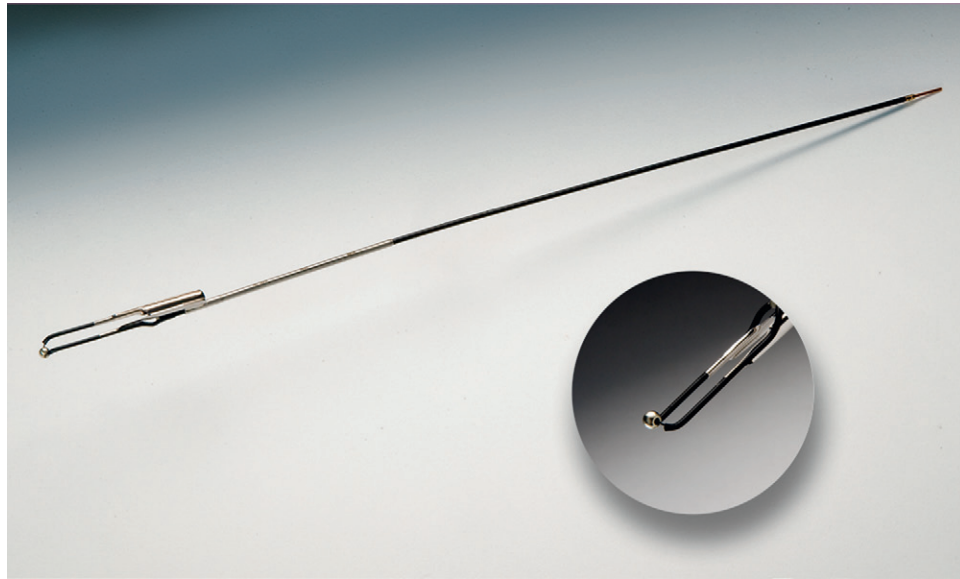
to manipulate the "lid" or tip up and down. The deflecting element fits into the cystoscope sheath for use.

Instrument Insight: To prevent damage to the urethra and the lid apparatus, it is important to remember to return the lid to the neutral position before handing the catheter deflecting element to the surgeon. The ureteral catheter is inserted into the side port and pulled down to the lid at the tip of the sheath. The lid is lowered and the element is inserted into a cystoscope for use. Once inside the bladder, the lid is manipulated to guide the catheter into the ureteral orifice.

**Instrument: WORKING ELEMENT****Other Names:** Iglesias**Use(s):** Used with a resectoscope, telescope, and electrode to resect tissue and coagulate bleeders during a transurethral resection of the prostate or a bladder tumor.**Description:** The proximal end accepts the telescope, which is slid through the sheath to the working end for viewing. The handle has a spring mechanism that draws the electrode back into the resectoscope sheath. Attaching the electrode is accomplished by sliding the wire end through the guide below the telescope sheath and into the handle where it is seated. The small black button on the side releases the

electrode. It is not necessary to depress the button to seat the electrode. The small hole next to the black button is for active cord connection. The small silver button at the top of the sheath will release the working element from the resectoscope sheath.

Instrument Insight: A 30° telescope is loaded into the working element, and this enables the electrode to be seen during the procedure. Activation of the working element is accomplished when the surgeon steps on the foot pedal and compresses the handle, which draws the electrode through the tissue and back into the resectoscope sheath.**Instrument: LOOP ELECTRODE****Other Names:** Loop**Use(s):** Commonly used for resection and coagulation of prostatic and bladder tissues during transurethral procedures. A loop electrode vaporizes the tissue in its immediate area as it resects a piece of tissue. Bleeders may also be coagulated simultaneously or individually.**Description:** An insulated wire that bifurcates at the working end and leads to a metal crescent-shaped wire between the two prongs.**Instrument Insight:** The electrode is seated into the working element by sliding the proximal end through the small hollow tube under the telescope sheath and into the handle. The small trough lies on top of the electrode and slides over the sheath, securing it to the working element. The electrodes are color-coded to fit the proper size resectoscope.

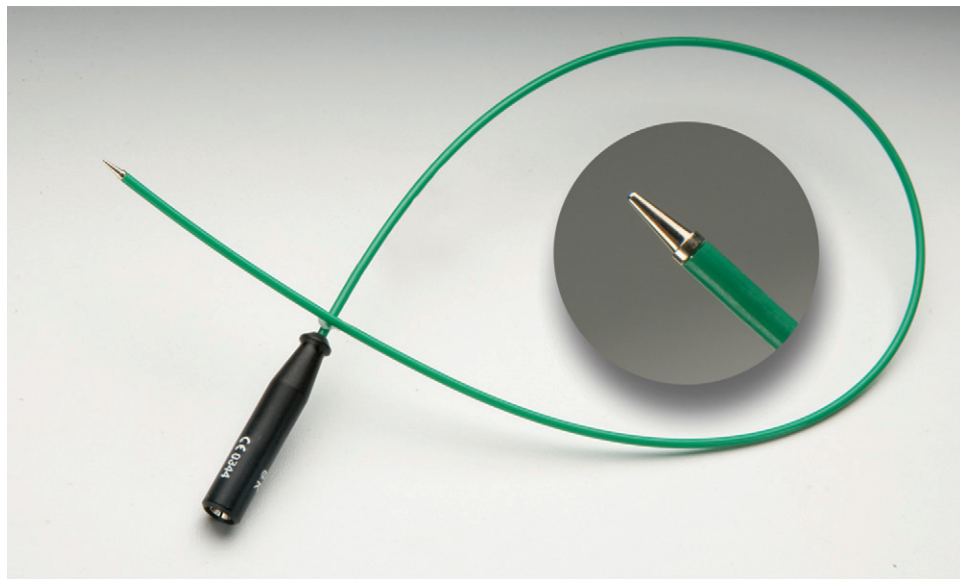
**Instrument: BALL LOOP ELECTRODE**

Use(s): Used for coagulation of a larger surface area of the bladder.

Description: An insulated wire that bifurcates at the working end and leads to a metal roller ball at the working end.

Instrument Insight: The electrode is seated into the working element by sliding the proximal end

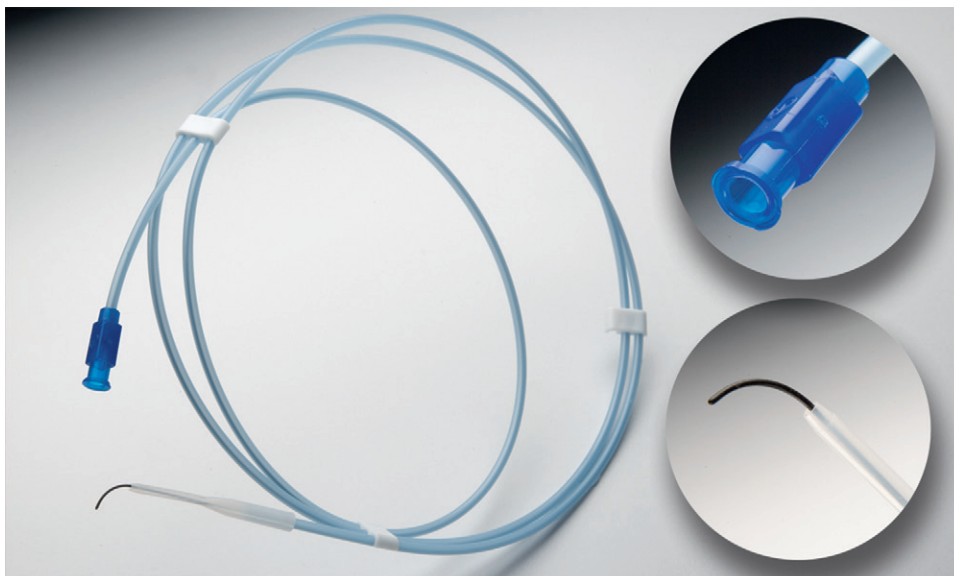
through the small hollow tube under the telescope sheath and into the handle. The small trough lies on top of the electrode and slides over the sheath, securing it to the working element. The electrodes are color-coded to fit the proper size resectoscope.

**Instrument: BUGBEE ELECTRODE**

Use(s): Used for coagulating small areas, usually after a bladder biopsy.

Description: The Bugbee is a flexible monopolar cautery electrode available in various diameters and lengths.

Instrument Insight: The Bugbee is a reusable electrode that is generally packaged with the cord that attaches to the generator.

**Instrument: GUIDEWIRE**

Other Names: Glidewire

Use(s): Used for guiding stents, dilators, baskets, and other devices into the ureters.

Description: A long, thin wire with a curved or straight flexible tip. Depending on the manufacturer, the wire will be constructed of a metal or synthetic material, which may be covered with a lubricous coating to ease insertion. The wire is a single-use item that comes packaged inside

a hard plastic coil that has an irrigation port at the proximal end and an insertion guide at the working end.

Instrument Insight: Moistening the guidewire will ease the insertion through the working channel of the scope. This can be accomplished by injecting water through the irrigation port on the plastic coil or by dipping the wire itself in a basin of water.

CLAMPING AND OCCLUDING INSTRUMENTS

**Instrument: YOUNG RENAL CLAMP**

Use(s): Used for clamping heavy tissues and the pedicles during open kidney procedures.

Description: A long, heavy, curved clamp with longitudinal serrations and with cross-serrations at the tip.



Instrument: HERRICK KIDNEY CLAMP

Other Names: Pedicle clamp

Use(s): Used for clamping heavy tissues and the pedicles during open kidney procedures.

Description: A long, heavy, double-angle clamp with longitudinal serrations.



Instrument: WERTHEIM-CULLEN PEDICLE CLAMP

Other Names: Pedicle clamp

Use(s): Used for clamping heavy tissues and the pedicles during open kidney procedures.

Description: Broad right angle clamp with longitudinal serrations that run from the tip to the curvature.

**Instrument: WERTHEIM CLAMP**

Use(s): Used for clamping heavy tissue and vessels during open urological procedures.

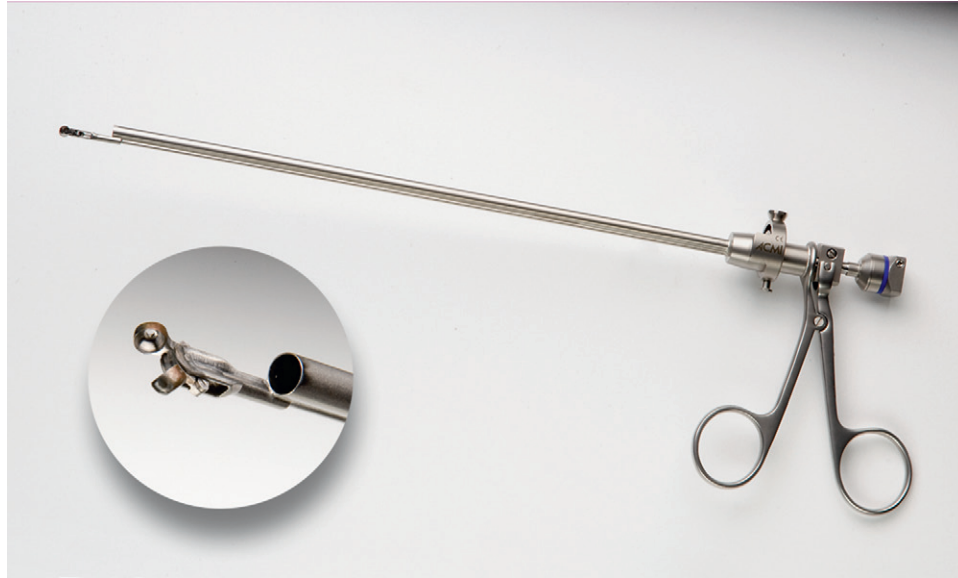
Description: A long, heavy, curved clamp with horizontal serrations running the length of the jaws.

**Instrument: MAYO-GUYON VESSEL CLAMP**

Use(s): Used for clamping heavy tissue and vessels during open urological procedures.

Description: A heavy clamp with long, curved jaws and horizontal serrations running the length of the jaws.

CUTTING AND DISSECTING INSTRUMENTS



Instrument: BIOPSY FORCEPS

Use(s): To remove small bites of tissue in the bladder for examination.

Description: The proximal end accepts the telescope lens, and the finger rings open and close

the cup-shaped jaws at the working end. The biopsy forceps attaches to the cystoscope sheath.

Instrument Insight: To prevent crushing or damaging the biopsy tissue, it can be swished in saline or pushed out of the jaws with a fine needle.



Instrument: OTIS URETHROTOME

Use(s): Used to perform a blind urethrotomy for strictures.

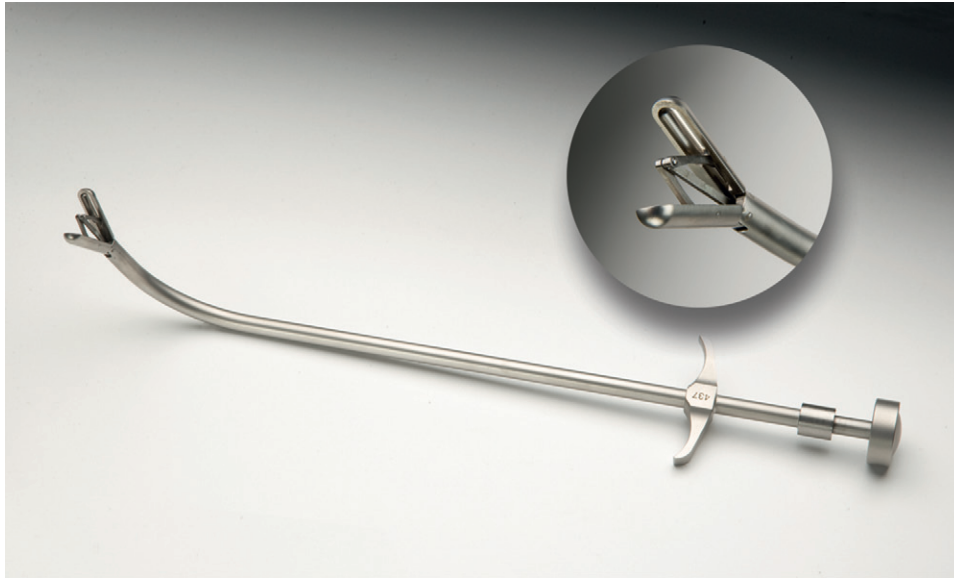
Description: This has two pieces: Urethrotome and a blade. The Urethrotome is straight dilator that is expanded open when the round knob on the distal end is turned. The dial below the knob allows the surgeon to determine the amount of dilatation that is occurring when the knob is turned. The blade fits down into the dilating rod and is pushed upward as the dilator is opened. When the dilator is

expanded to the appropriate diameter, the surgeon will pull the blade out, cutting the stricture.

Instrument Insight: Otis Urethrotome is inserted into the urethra and is dilated to the desired width. The blade is pulled out and cuts the stretched urethra, releasing the strictures.

CAUTION: When loading the blade onto urethrotome always use the handle on the blade to do so. The blade is very sharp and can cut through your gloves and skin.

GRASPING AND HOLDING INSTRUMENTS

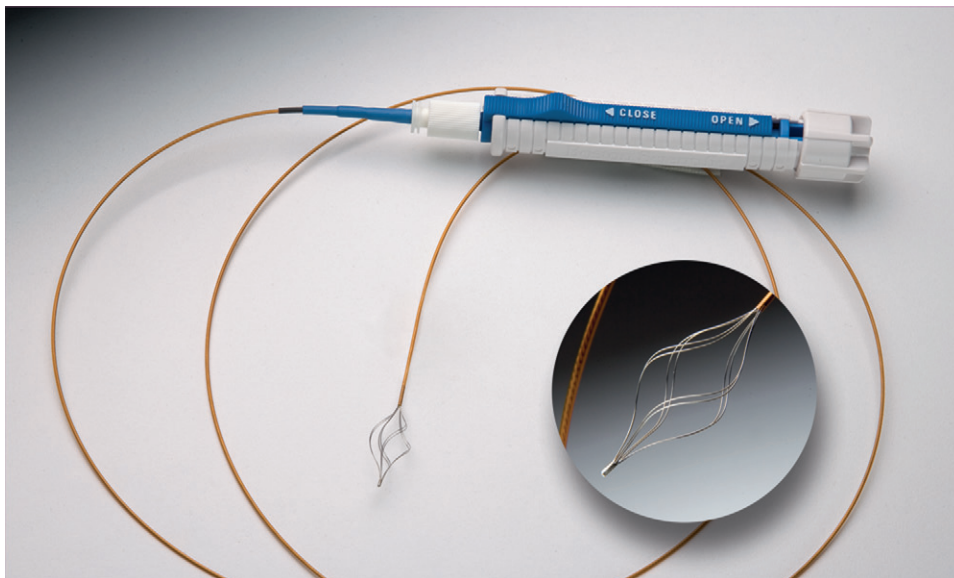


Instrument: **LOWSLEY PROSTATIC TRACTOR**

Use(s): Used for manipulating the prostate downward in the direction of the perineum during a perineal prostatectomy.

Description: A slender, curved instrument with cupped blades at the tip that open and close by rotation of the handle at the proximal end.

Instrument Insight: The Lowsley is passed through the urethra into the bladder and then opened; therefore, it should be handed to the surgeon with the blades closed.



Instrument: **STONE BASKET**

Use(s): Used for entrapping and removing renal calculi via a ureteroscope or a cystoscope.

Description: A single-use device that consists of a plastic handle with a thumb slide mechanism for opening and closing the basket, a catheter sheath, and a wire catheter with expandable

wire basket. These devices are available in a variety of lengths, tip designs, and basket configurations depending on the manufacturer.

Instrument Insight: When the thumb slide on the handle is slid forward, the basket collapses into the outer sheath and when pulled backward the basket is expanded.



Instrument: RANDALL STONE FORCEPS

Use(s): Used for grasping renal stones.

Description: A curved, nonratcheted grasping forceps with fenestrated, oval-cup jaws with

horizontal serrations. The Randall forceps are available in different intensities of curvature, ranging from one fourth, one half, and three fourths of a curve to a full curve.

PROBING AND DILATING INSTRUMENTS



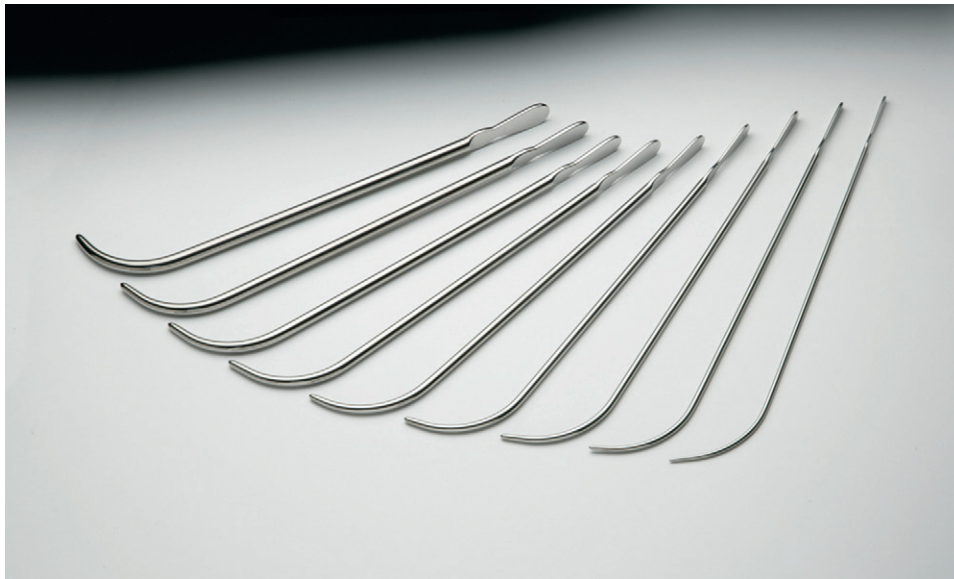
Instrument: WALTHER FEMALE URETHRAL SOUNDS

Other Names: Female sounds, female dilators, urethral dilators

Use(s): Provide gradual dilation of the female urethra. Often used before the placement of the cystoscope or resectoscope to ease insertion. The female sounds can also be used to obtain a urine specimen or drain the bladder.

Description: A stainless-steel tube with a narrowed, curved tip and oval drainage lumen. The sound size is measured on the French scale with even numbers only that range from 12F to 38F.

Instrument Insight: The sounds should be arranged on the back table from smallest to largest.



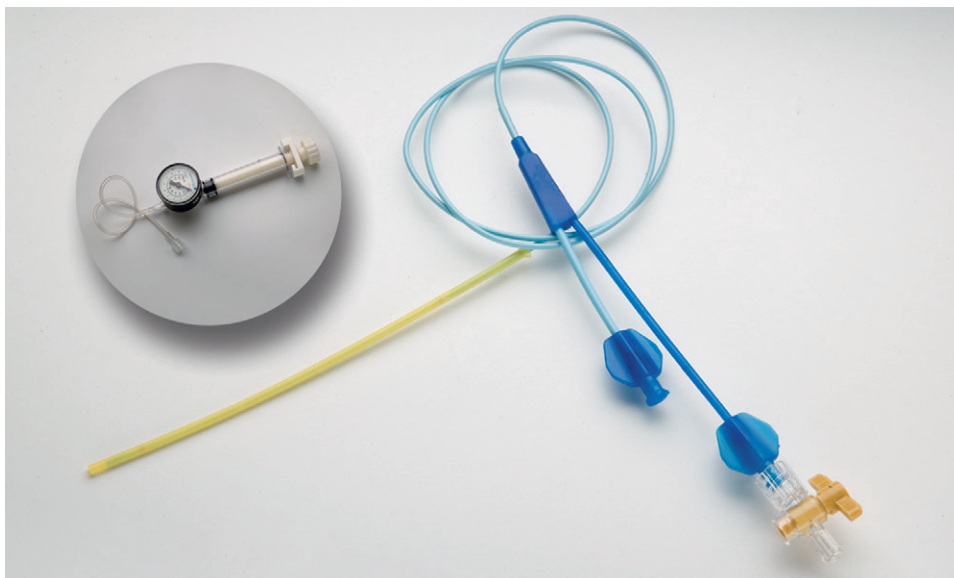
Instrument: VAN BUREN URETHRAL
SOUNDS

Other Names: Male sounds, Van Buren, urethral dilators

Use(s): Provide gradual dilation of the male urethra. Often used before the placement of the cystoscope or resectoscope to ease insertion.

Description: A long stainless-steel rod with a narrowed, curved tip. The sound size is measured on the French scale with even numbers only that range from 8F to 40F.

Instrument Insight: The sounds should be arranged on the back table from smallest to largest.



Instrument: BALLOON DILATOR

Use(s): Used for dilatation of ureteral strictures.

Description: A long plastic ureteral catheter with a high-pressure balloon tip on the distal end. At the proximal end is a balloon inflation

port with stopcock and a guidewire insertion port.

Instrument Insight: The balloon is inflated with a contrast media solution for visualization by fluoroscopy.

RETRACTING AND EXPOSING INSTRUMENTS

Instrument: YOUNG ANTERIOR RETRACTOR

Other Names: Anterior prostate retractor

Use(s): Used for retracting muscles and tissues during a radical perineal prostatectomy.

Description: A smooth, concave, anterior-bent blade with a solid grip handle.



Instrument: YOUNG BULB RETRACTOR

Other Names: Notched retractor, bulb retractor

Use(s): Used for retracting muscles and tissues during a radical perineal prostatectomy.

Description: A short bent blade with a U-shaped notch at the end and a solid grip handle.

Instrument Insight: The U shape allows the catheter to be placed at the notch to prevent bending or crushing of the catheter.



Instrument: YOUNG BIFURCATED RETRACTOR

Other Names: Bifurcated prostate retractor

Use(s): Used for retracting muscles and tissues during a radical perineal prostatectomy.

Description: A smooth, lateral-bent retractor with a U-shaped bifurcation in the blade and a solid grip handle.

Instrument Insight: The U shape allows the catheter to be placed at the notch to prevent bending or crushing of the catheter.

SUCTIONING AND ASPIRATING INSTRUMENTS



Instrument: ELLIK EVACUATOR

Use(s): Used for removing prostatic tissue segments and/or blood clots from the bladder.

Description: A double-glass bowl and bulb with adaptor tip. The silicone tubing slides over the glass arm of the bowl. The adaptor is required to connect the evacuator to the inner sheath of the resectoscope.

Instrument Insight: All air must be eliminated from the bulb and glass bowl before use. After

the evacuator is filled with water, it is attached to the resectoscope sheath. The bulb is squeezed and released, causing whirling action of the water in and out of the bladder. The tissue pieces are trapped in the bottom portion of the glass bowl. To avoid reintroduction of the tissue back into the bladder, the tissue should be removed between uses.

**Instrument:** MICROVASIVE EVACUATOR

Other Names: Disposable evacuator

Use(s): Used for removing tissue segments and/or blood clots from the bladder.

Description: A pliable plastic container with a screw on the lid that has a filter mechanism attached to the inside and an adaptor arm on the exterior. The adaptor fits inside the inner sheath of the resectoscope.

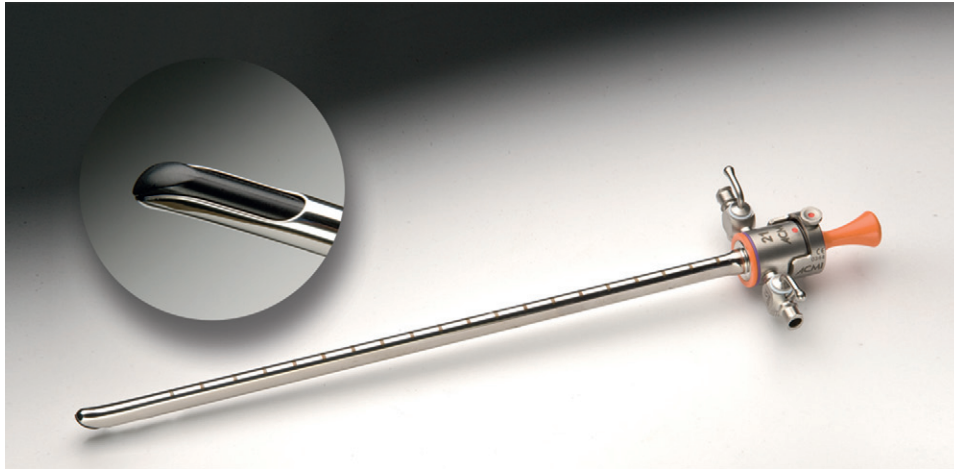
Instrument Insight: All air must be removed from the container before use. After the evacuator is filled with water, it is attached to the resectoscope sheath. The container is squeezed and released, causing a whirling action of the water in and out of the bladder. The filter mechanism inside the container traps the specimen, which allows for reuse without removing the tissue.

**Instrument:** TOOMEY SYRINGE

Use(s): Used for aspirating specimens and blood clots from the bladder. Often used to check for bleeding after a transurethral resection; this is done by injecting irrigation through the urethral catheter and aspirating it back out, checking the color of the return.

Description: A glass syringe calibrated in milliliters with a stainless steel catheter adaptor tip.

Instrument Insight: When assembling the Toomey syringe, wetting the plunger portion will ease the insertion into the barrel. A Toomey syringe may also be a single patient use that is entirely made of plastic.

VIEWING INSTRUMENTS**Instrument: CYSTOSCOPE SHEATH AND OBTURATOR**

Use(s): Used for visual examination of the urethra, bladder, and ureteral orifices. The cystoscope is used for retrograde pyelograms, bladder biopsies, ureteral stone manipulation, stent placement, and other endoscopic urological procedures. The obturator is used to ease initial insertion of the cystoscope into the bladder.

Description: The cystoscope sheath is a hollow tube with a rounded tip and mouth at the distal end. The proximal end is the insertion port for the obturator, bridge, telescope, deflecting

mechanism, biopsy forceps, and other devices. It also has a stopcock on each side for the inflow of irrigation. The size of the cystoscope is measured according to the French (F) scale. A 21F cystoscope is the most widely used. The obturator is a removable core that has a rounded end that protrudes to the far opening of the sheath.

Instrument Insight: Cystoscope sheaths and obturators are color-coded to assist with proper assembly. Each company has its own color code, but if you spend time working with these instruments, it is beneficial to commit the colors to memory.

**Instrument: RESECTOSCOPE SHEATH AND OBTURATOR**

Use(s): The outer sheath is used with the working element, telescope, and electrode to resect tissues and coagulate bleeders during a transurethral resection of the prostate or bladder tumor. The obturator is used to ease initial insertion of the resectoscope into the bladder.

Description: The resectoscope sheath is a hollow stainless-steel tube with a beveled ceramic tip at the distal end. The proximal end is an insertion

port for the obturator, working element, telescope, and electrode; the proximal end also has a stopcock on each side for the inflow of irrigation. The obturator is a removable core that has a bullet-shaped end that protrudes through and beyond the far opening. The resectoscope is available in two sizes: 25F and 27F.

Instrument Insight: Resectoscope sheaths and obturators are color coded to assist with proper assembly.

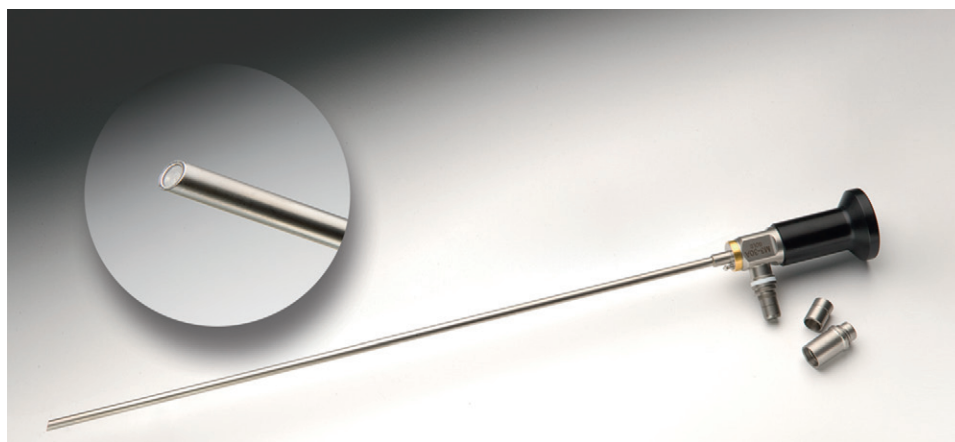


Instrument: ENDOSCOPIC CAMERA

Use(s): Used for transmission images from the rigid telescope to the video monitor.

Description: At the distal end of the camera is the coupler that attaches the camera to the eyepiece of the rigid scope. The coupler is attached to the camera head, which provides the image quality. Attached to the camera head is the cord, which relays images back to the video system.

Instrument Insight: Most camera failures are related to a damaged cord. Care should be exercised when handling the camera and cord. They should never be placed under a heavy object, dropped, twisted, kinked, or immersed in water or any liquid.



Instrument: 30° TELESCOPE

Other Names: 30° lens, 30° endoscope

Use(s): Used for visualization of the urethra, interior bladder, and the ureteral orifices.

Description: A rigid stainless-steel tube containing an optical chain of precisely aligned glass lenses and spacers. The objective lens is located at the distal tip of the scope. This determines the viewing angle. The stainless-steel cylinder rod is called the optical element of the telescope, providing both images and light. The light connector allows attachment of the light cord to the telescope. At the proximal end is the eyepiece or ocular lens; this attaches to

the camera coupler, or the surgeon may view the field directly.

Instrument Insight: 30° is the angle in which the objective lens views. The 30° lens is the most often used in urology because it delivers the best panoramic view and allows for visualization of the urethra and the trigone area in the bladder.

⚠ CAUTION: Endoscopes are expensive and fragile. Care should be exercised when handling an endoscope; it should never be picked up by the distal telescope end, placed under heavy objects, or dropped.

**Instrument: 70° TELESCOPE****Other Names:** 70° lens, 70° endoscope**Use(s):** Used for visualization of the urethra, interior bladder, and the ureteral orifices.**Description:** A rigid stainless-steel tube containing an optical chain of precisely aligned glass lenses and spacers. The objective lens is located at the distal tip of the scope. This determines the viewing angle. The stainless-steel rod cylinder is called the optical element of the telescope, providing both images and light. The light connector allows attachment of the light cord to the telescope. At the proximal end is

the eyepiece or ocular lens; this attaches to the camera coupler, or the surgeon may view the field directly.

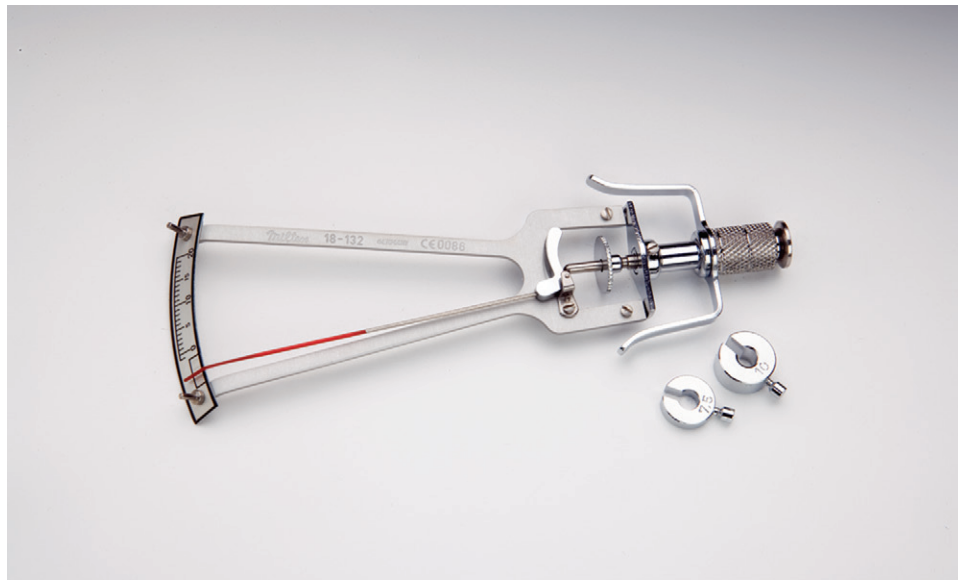
Instrument Insight: 70° is the angle in which the objective lens views. The 70° lens is often used to inspect the bladder walls.**⚠ CAUTION:** Endoscopes are expensive and fragile. Care should be exercised when handling an endoscope; it should never be picked up by the distal telescope end, placed under heavy objects, or dropped.**Instrument: FLEXIBLE URETEROSCOPE****Use(s):** Used for visual examination of the urinary tract, including the ureters and the renal pelvis. Ureteroscopy is commonly performed for removal of ureteral or renal calculi. It also can be used for other urological procedures such as diagnosis, fulguration of bleeders, removal of neoplasm, and retrieval of migrated stents.**Description:** The proximal end is comprised of the eyepiece, the light connection post, a deflecting control knob (which operates the bending section, the suction, and air/water valves), and the biopsy port. The central body

is attached to an insertion tube, which is a flexible tube that contains channels for suction, biopsy, irrigation, and fiberoptic light and image bundles. At the distal end is a bending section, which contains the objective lens and light lens and can be manipulated in various directions within the internal structures.

Instrument Insight: When using a flexible ureteroscope, it should never be placed under a heavy object, dropped, twisted, or kinked because the tiny glass lens and fibers inside can be easily damaged.

Ophthalmic Instruments

ACCESSORY INSTRUMENTS



Instrument: TONOMETER

Other Names: Schiøtz tonometer

Use(s): Used for measuring intraocular pressure of the eye by recording the resistance of the cornea to weight.

Description: The distal working end is a concave plunger, which is gently placed onto the cornea.

A small, round weight is slid into the center section of the tonometer, which pushes down on the plunger and flattens the cornea. The needle on the proximal end moves to register the pressure. Weights of 5.5, 7.5, and 10 grams are used.

**Instrument: FOX EYE SHIELD**

Use(s): Used for protection of the eye after ophthalmic surgery.

Description: A lightweight, malleable, metal eye shield that is oval and convex to fit over the eye.

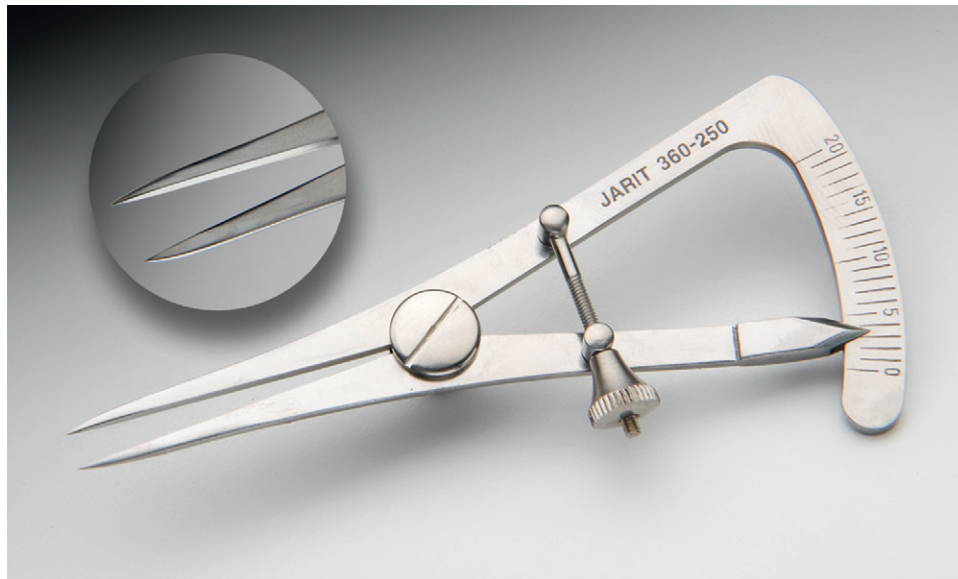
Instrument Insight: Generally placed over the dressing and taped in place.

**Instrument: JEWELER'S BIPOLAR FORCEPS**

Use(s): Used for coagulating small blood vessels of the eye and the eyelids.

Description: Resembles a tissue forceps, is either insulated or noninsulated, and has straight forceps with fine tips.

Instrument Insight: There are many different types of bipolar forceps that can be used in eye procedures.



Instrument: CASTROVIEJO CALIPER

Use(s): Used for precise measuring of eye structures such as the cornea, lens, pupils, or lids.

Description: The proximal end measures from 0 to 20 mm in 1-mm increments. When the screw device is tightened or loosened, the smooth narrowed tips open or close.



Instrument: WELLS ENUCLEATION SPOON

Use(s): Used for lifting the globe upward to dissect the optic nerve during enucleation.

Description: An angled spoon-shaped instrument with a rounded notch at the distal end.



Instrument: BARRAQUER IRIS SPATULA

Other Names: Iris spatula

Use(s): Used for repositioning the iris.

Description: A blunt angled tip with a gently curved flat blade and a short hexagonal handle.



Instrument: SINSKEY HOOK

Use(s): Used for manipulating the lens.

Description: A blunt right angle hook with a flattened handle.

CLAMPING AND OCCLUDING INSTRUMENTS

**Instrument:** SERREFINE CLAMPS**Use(s):** Used to tag and hold bridge or fine sutures.**Description:** Spring-action clamp with curved or straight jaws with horizontal serrations and a blunt tip.**Instrument Insight:** These are also used in vascular surgery to occlude small vessels.

CUTTING AND DISSECTING INSTRUMENTS

**Instrument:** MEYHOEFFER CHALAZION CURETTES**Use(s):** Used for removing Chalazion contents by scraping.**Description:** Small, sharp, scoop-shaped tips with a flattened handle.**Instrument Insight:** Tips range from 1 to 3.5 mm in diameter.



Instrument: STRABISMUS SCISSORS

Use(s): Used for dissecting the lateral and medial muscles during recession and resection.

Description: Straight or curved fine, blunt-tip scissors.



Instrument: KNAPP IRIS SCISSORS

Use(s): Used for incising and dissecting the iris.

Description: Straight or curved sharp, fine-tip scissors.



Instrument: BARRAQUER IRIS SCISSORS

Use(s): Used for incising and dissecting the iris.

Description: Micro scissors with oval fingertip pads and angled, blunt-tip blades.

Instrument Insight: Squeezing the finger pads between the thumb and forefinger will close these scissors.



Instrument: CASTROVIEJO CORNEAL SCISSORS

Other Names: Castro's

Use(s): Used for incising and dissecting the cornea. During a corneal implant procedure,

these scissors are commonly used to complete the trephination.

Description: Microsurgical spring-action scissors with angled blades.



Instrument: WESTCOTT TENOTOMY
SCISSORS

Use(s): Used for incising the cornea, sclera, and iris and for dividing eye muscles.

Description: Spring-action scissors with fine, narrowed, blunt tips that can be curved or straight.



Instrument: STEVENS TENOTOMY
SCISSORS

Other Names: Stevens scissors

Use(s): Used for dividing and dissecting the muscles and tendons of the eye. These are commonly used for dividing the lateral and

medial tendons and muscles of the eye during recession and resection for strabismus.

Description: Small, fine scissors that can have curved or straight blades that narrow to blunt tips.



Instrument: EYE SUTURE SCISSORS

Use(s): Cut fine eye sutures.

Description: Small, fine scissors with straight beveled blades that taper to sharp tips.

Instrument Insight: These scissors should be used to cut suture only.



Instrument: ENUCLEATION SCISSORS

Use(s): Used to free the globe from the orbit and transect the optic nerve.

Description: Extremely curved scissors that narrow to a blunt tip.



Instrument: VANNAS CAPSULOTOMY SCISSORS

Other Names: Vannas

Use(s): To incise into the capsule tissue.

Description: Spring-action micro scissors with fine curved or straight blunt-tip blades.

GRASPING AND HOLDING INSTRUMENTS



Instrument: LENS INSERTION FORCEPS

Other Names: Clayman lens forceps, lens inserter

Use(s): Used for grasping, inserting, and positioning an intraocular lens implant.

Description: Spring-action forceps with smooth, curved jaws and angled tips.



Instrument: DESMARRES CHALAZION CLAMP

Other Names: Oval chalazion clamp

Use(s): Used to stabilize and evert the eyelid to expose the chalazion.

Description: Forceps with a flattened oval plate at the end of one arm and a matching open oval

ring on the other arm with a screw-locking device that holds the clamp in place.

Instrument Insight: This clamp provides hemostasis and a rigid surface against which the cyst can be incised.



Instrument: HUNT CHALAZION CLAMP

Other Names: Round chalazion clamp

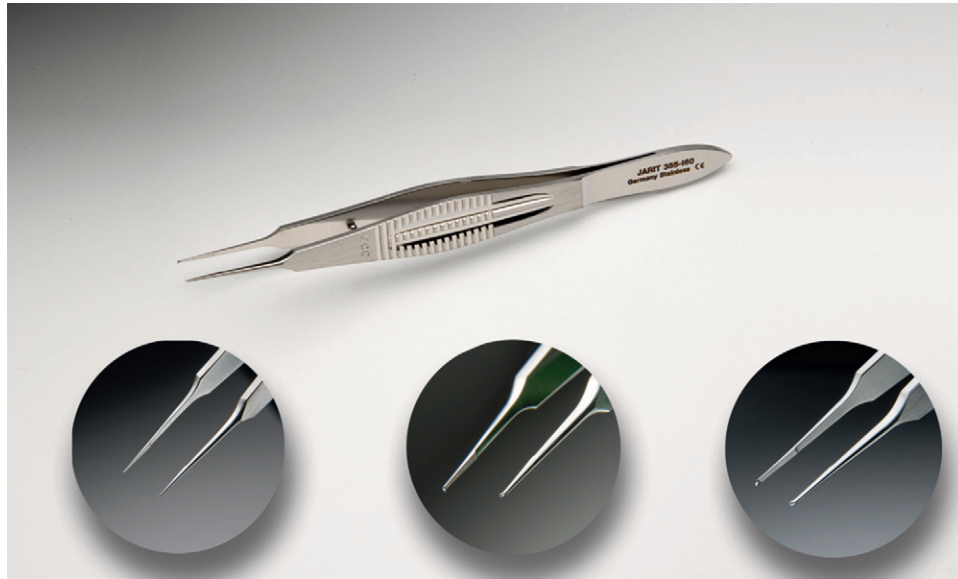
Use(s): Used to stabilize and evert the eyelid to expose the chalazion.

Description: Forceps with a flattened round plate at the end of one arm and a matching open

ring on the other arm with a screw-locking device that holds the clamp in place.

Instrument Insight: This clamp provides hemostasis and a rigid surface against which the cyst can be incised.

**Instrument: JEWELER'S FORCEPS****Use(s):** Used for grasping the intraocular lens.**Description:** Smooth forceps with narrowed, pointed tips.**Instrument Insight:** The tips are very sharp and can easily puncture gloves or drapes.**Instrument: COLIBRI TISSUE FORCEPS****Use(s):** This forceps is designed for several functions. The tooth at the tip is used for holding the cornea or the sclera edge when suturing. The platform behind the tip allows for tying suture. It can also be used to grasp the iris.**Description:** Long, thin, downward curving jaws with angled, toothed tips and a smooth platform behind the tips.**Instrument Insight:** *Colibri* means *bird* in Italian and refers to the design of the forceps. The long thin body assures optimal viewing during surgical procedures.



Instrument: CASTROVIEJO SUTURING
TISSUE FORCEPS 0.12 MM, 0.3 MM, 0.5 MM

Use(s): Used to grasp and manipulate tissues and tie fine sutures.

Description: Small, fine tissue forceps with long, thin jaws that have smooth tying platforms and three interlocking teeth at the tips.

Instrument Insight: The area of the eye on which surgery is performed determines the size of the tissue forceps that will be used.



Instrument: McPHERSON TYING FORCEPS

Use(s): Designed for tying fine suture; commonly used in corneal grafting and cataract surgery.

Description: Small, fine tissue forceps that can have angled or straight jaws with smooth tying platforms.

Instrument Insight: This should not be used for grasping tissues because it will crush them.



Instrument: BISHOP-HARMON IRIS TISSUE FORCEPS

Use(s): Used for grasping tissue in and around the eye.

Description: Small, fine tissue forceps with long, thin jaws and three interlocking teeth at the tips.



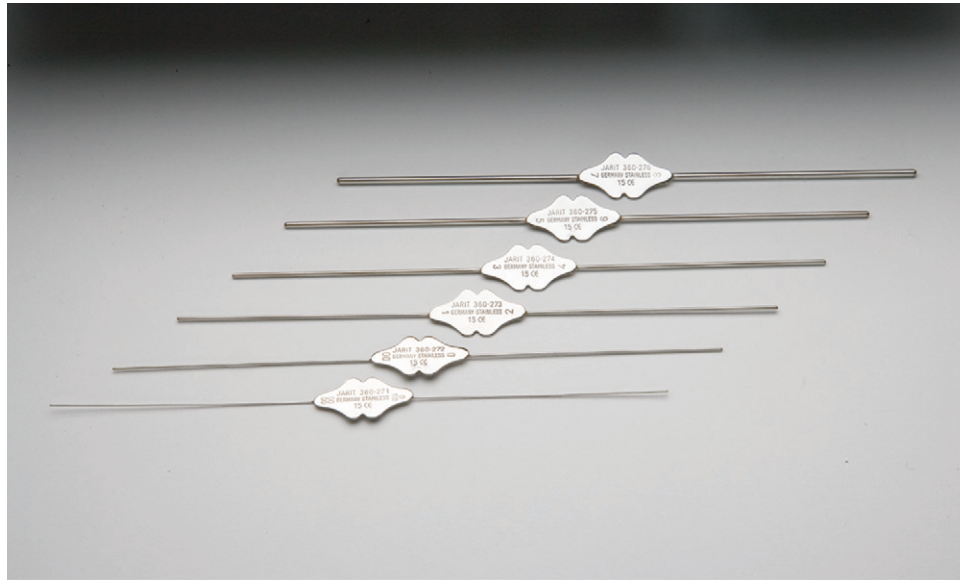
Instrument: JAMESON FORCEPS

Other Names: Muscle clamp

Use(s): Used to clamp and hold the extrinsic muscle and provide hemostasis during strabismus procedures.

Description: A flat serrated handle with a side lock and a right-angle shaft with six 1-mm teeth on one jaw that fit into the holes on the other jaw.

PROBING AND DILATING INSTRUMENTS



Instrument: BOWMAN LACRIMAL PROBE

Other Names: Lacrimal dilators, duct probes

Use(s): Used for probing and gradually dilating the lacrimal duct. This instrument is also used to dilate the salivary duct opening under the tongue.

Description: A thin wire on each side of a diamond-shaped plate, with the wire on one side larger than that on the other. The plate is designed to grasp and steady the probe.

Instrument Insight: Processed in sets of six.



Instrument: WILDER LACRIMAL DILATOR

Other Names: Punctal lacrimal dilator

Use(s): Used for dilating the lacrimal punctum.

Description: Tapered blunt tip with round, rough handle.

RETRACTING AND EXPOSING INSTRUMENTS



Instrument: **BARRAQUER EYE SPECULUM**

Other Names: Paper clip, wire speculum

Use(s): Holds open the upper and lower eyelids. Commonly used for cataract extraction.

Description: A rigid wire frame with open, curved blades.



Instrument: **CASTROVIEJO EYE SPECULUM**

Use(s): Used for wide retraction of the upper and lower eyelids. Often used in strabismus and enucleation procedures in which wide retraction of the lids is needed.

Description: Adjustable self-retaining retractor with curved, open blades.



Instrument: WILLIAMS EYE SPECULUM

Use(s): Used for wide retraction of the upper and lower eyelids. Often used in strabismus and enucleation procedures in which wide retraction of the lids is needed.

Description: Adjustable self-retaining retractor with curved, open blades.



Instrument: DESMARRES LID RETRACTOR

Use(s): Used for retraction of the eyelids.

Description: Hand-held retractor with a concave curved blade and a round, smooth handle.

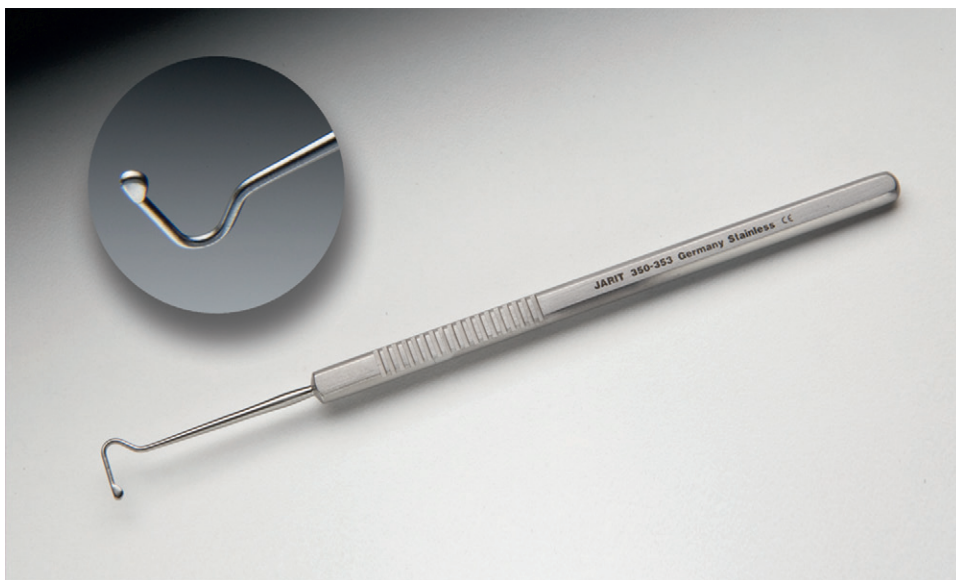


Instrument: VON GRAEFE STRABISMUS HOOK

Other Names: Muscle hook

Use(s): Used for lifting and freeing the extrinsic eye muscles from the sclera during strabismus procedures.

Description: A blunt right-angled hook with a flattened smooth handle.



Instrument: JAMESON MUSCLE HOOK

Use(s): Used for lifting and retracting the extrinsic eye muscles during strabismus procedures.

Description: An acute-angle hook with a round tip and a flattened handle.

SUTURING AND STAPLING INSTRUMENTS

Instrument: CASTROVIEJO NEEDLE HOLDER

Use(s): Used for holding fine suture needles in eye procedures.

Description: These can be a locking or nonlocking needle holder with narrowed blunt jaws.



Instrument: McPHERSON NEEDLE HOLDER

Use(s): Used for holding fine suture needles in eye procedures.

Description: Nonlocking needle holder with tapered blunt jaws.



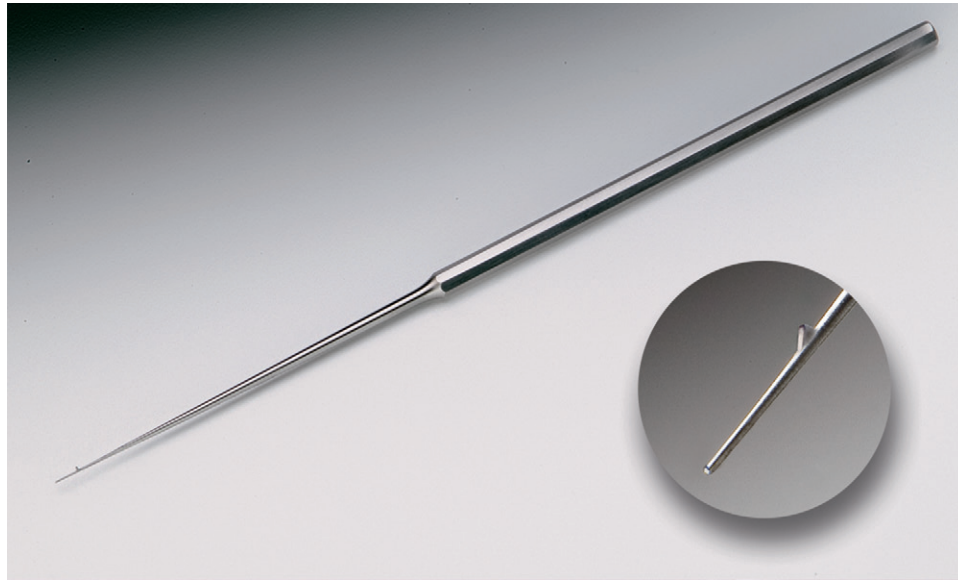
Instrument: BARRAQUER NEEDLE HOLDER

Use(s): Used for holding fine suture needles in eye procedures.

Description: Locking needle holder with curved, narrowed, blunt jaws.

Otorhinolaryngology Instruments

ACCESSORY INSTRUMENTS



Instrument: HOUSE STRUT CALIPER

Other Names: Measuring tool, strut

Use(s): Used for measuring the ossicles and distances in the middle ear for repair or replacement, especially the stapes.

Description: Sharp instrument with a barb toward the tip for measuring.

**Instrument: HOUSE GELFOAM PRESS****Other Names:** Gelfoam masher**Use(s):** The press is used to compress Gelfoam into thin sheets that are cut into tiny squares and used for packing after middle ear procedures.

This is done to support and position a graft or to stabilize the prosthesis.

Description: Long shanks with finger rings and flat plates at its working tip.**Instrument: COTTLE BONE CRUSHER****Use(s):** Used to flattening the septal cartilage before replacing it in the nose.**Description:** A rectangular solid box with a channel in the middle and a solid lid that closes

into the channel, compressing the object placed inside.

Instrument Insight: A mallet is used to impact the lid to prepare the cartilage.



Instrument: COTTLE MALLET

Other Names: Mallet

Use(s): Exerts force on osteotomes, chisels, gouges, tamps, and other specially designed instruments.

Description: Solid stainless-steel head with one flat face and one round face attached to a black

aluminum handle. Mallets are hammering-type instruments that weigh between 5 ounces and 2 pounds.

Instrument Insight: The surgeon will use a "tap-tap" rhythm when hitting the osteotome. The second hit is usually slightly harder than the first.

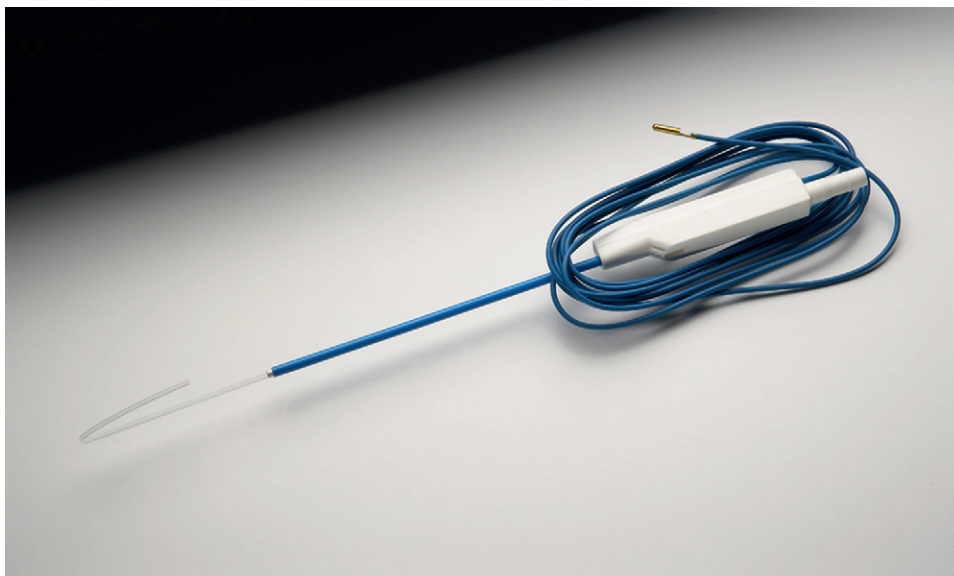


Instrument: LARYNGEAL MIRROR

Use(s): Used for visualization of pharyngeal and laryngeal areas from the back of the throat.

Description: The laryngeal mirror is a round-handled instrument with a small rounded mirror on the end. Mirrors are available in different diameters.

Instrument Insight: Mirrors may fog when inserted into the oral cavity, so the mirrors are dipped into some type of antifog solution or possibly warm water.

**Instrument: SUCTION COAGULATOR TIP****Other Names:** Neurocautery suction**Use(s):** Used for removing the tonsils and adenoids by cauterizing tissue and at the same time suctioning fluid, debris, and plume from the operative site.**Description:** A single-use insulated monopolar suction tip with a relief hole on the handgrip and also with a monopolar cord and stylet.**Instrument Insight:** During use the tip may become plugged with charred debris. This can be remedied by inserting the stylet and wiping the tip with a moistened sponge. A dispersive pad must be placed on the patient before use.**Instrument: COBLATION WAND****Use(s):** Used for removing tonsils and adenoids.**Description:** A single-use wand with an attached Coblation cord, suction connector, and irrigation tubing.**Instrument Insight:** Coblation technology is a controlled, non-heat-driven process that uses radiofrequency energy to excite the electrolytes

in a conductive medium, such as saline solution, creating precisely focused plasma. The plasma's energized particles have sufficient energy to break molecular bonds within tissue, causing tissue to dissolve at relatively low temperatures. The result is removal of targeted tissue with minimal damage to surrounding tissue.



Instrument: BILLEAU EAR LOOP

Other Names: Ear curette

Use(s): Used for removing cerumen from the ear canal.

Description: Long handle with a loop of wire at its working end.

Instrument Insight: Have a sponge ready to clean the tip of the instrument as the surgeon removes debris from the ear canal.

CLAMPING AND OCCLUDING INSTRUMENTS



Instrument: ADSON TONSIL/SCHNIDT FORCEPS

Other Names: Adson, Schmidt, fancy clamp

Use(s): Used for clamping small vessels in a deep wound, also for holding tonsil sponges.

Description: The jaws may be curved or straight; they have horizontal serrations running half of their length, ending in fine, blunt tips. The shanks are longer than those of a Crile or a Kelly.

CUTTING AND DISSECTING INSTRUMENTS



Instrument: DEAN RONGEUR

Use(s): Removes bone.

Description: Single-action instrument with a curved, sharp, cupped tip.

Instrument Insight: Tissues should be removed between uses with a moistened sponge.



Instrument: MYRINGOTOMY KNIFE

Other Names: Tympanostomy knife, ear knife

Use(s): Used for incising the tympanic membrane for removal of fluid and insertion of aeration tubes.

Description: A long, narrow, angled knife with a lancet blade tip.

Instrument Insight: May also use a Beaver knife handle with #377110 blades.



Instrument: SPRATT MASTOID CURETTES

Other Names: Ear curettes

Use(s): Remove diseased bone and tissue during a mastoidectomy.

Description: Small, oval cup shaped curettes.



Instrument: OVAL CUP FORCEPS, STRAIGHT, RIGHT, LEFT

Other Names: Micro cups, ear cup forceps

Use(s): Used for removing tissue and ossicles from the middle ear.

Description: Small instrument with finger rings and an oval cupped working tip. The cup tips can

be straight, left, right, up, or down-biting for accessing the middle ear.

Instrument Insight: These instruments should be cleaned with an instrument wipe between uses.



Instrument: HOUSE-DIETER MALLEUS
NIPPER

Other Names: Nipper

Use(s): Used for reshaping of the ossicles, especially the malleus, for ossicular reconstruction.

Description: Small instrument with finger rings and a guillotine-type cutting tip.



Instrument: BELLUCCI SCISSORS

Other Names: Middle ear scissors

Use(s): Used for cutting tissue in the middle ear.

Description: Small instrument with finger rings and delicate scissors on the working tip.

Instrument Insight: These are very delicate instruments; do not use them to cut packing or suture of any kind, as this will dull the blades.



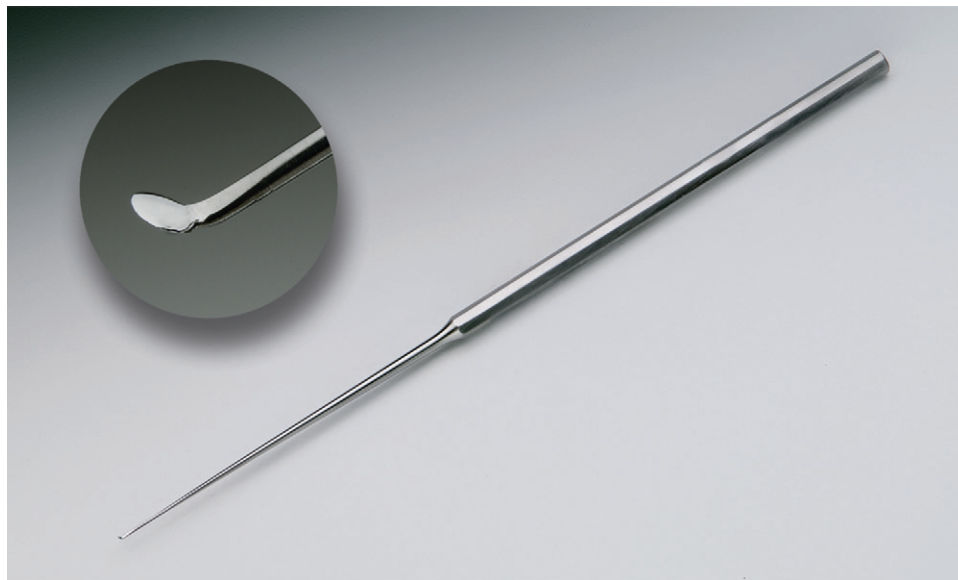
Instrument: HOUSE SICKLE KNIFE

Other Names: Ear knife

Use(s): Used to cut tissue in the ear canal and middle ear; often used to create a tympanic flap when performing middle ear surgery.

Description: Long handle with a sickle-type cutting edge at its working tip.

Instrument Insight: Commonly included in a rack with other delicate instruments for their protection.



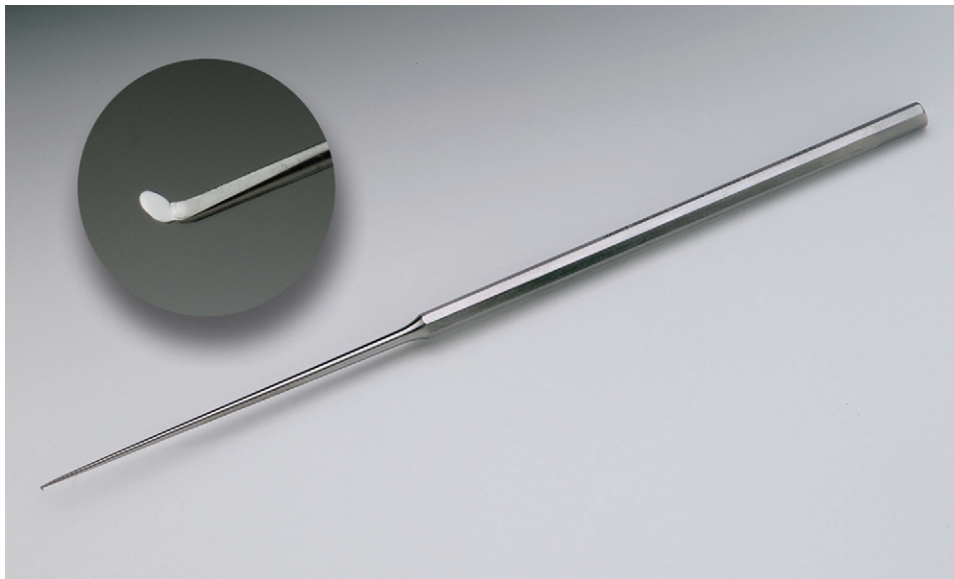
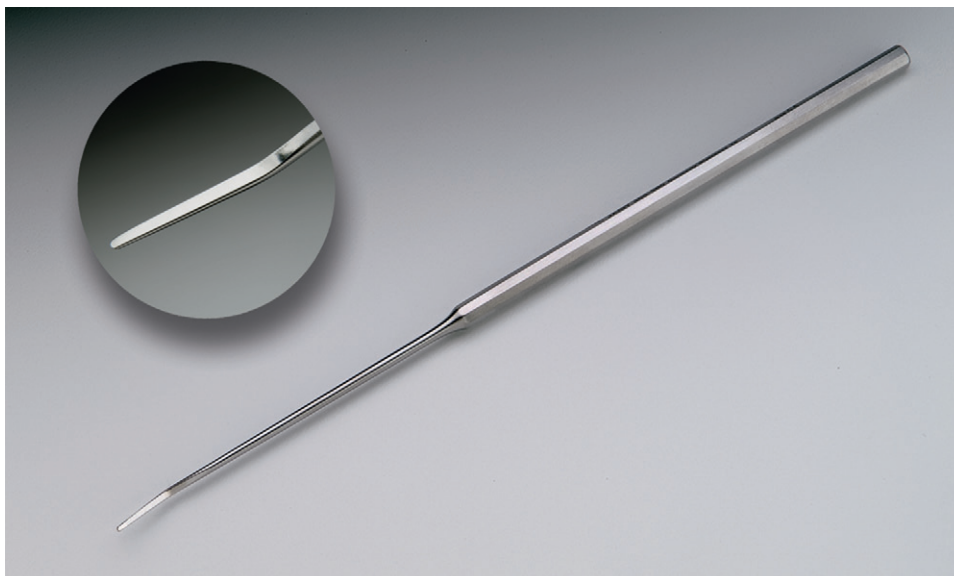
Instrument: HOUSE-SHEEHY KNIFE CURETTE

Other Names: Rosen knife, canal knife

Use(s): Used for removing tissue and bone from the ear canal and middle ear.

Description: Long handle with a rounded, angled, sharp tip.

Instrument Insight: Commonly included in a rack with other delicate instruments for their protection.

**Instrument:** HOUSE JOINT KNIFE**Other Names:** Canal knife, flap knife**Use(s):** Used for incising and dissecting tissue in the ear canal and middle ear, such as creating a tympanic flap, incising the canal during a tympanoplasty, or separating the incus from the stapes during a stapedectomy.**Description:** Long handle with a rounded, angled, sharp tip.**Instrument Insight:** Commonly included in a rack with other delicate instruments for their protection.**Instrument:** HOUSE ELEVATOR**Other Names:** Canal elevator, gimmick**Use(s):** Used for manipulating and dissecting tissue in the middle ear and ear canal, such as elevating the annulus of the tympanic membrane.**Description:** Long handle with an angled, elongated, oval, blunt tip.**Instrument Insight:** Commonly included in a rack with other delicate instruments for protection.

**Instrument:** LEMPERT ELEVATOR

Use(s): Used to cut and dissect tissue in the middle ear and ear canal.

Description: Long handle with a slightly angled, elongated, oval, blunt tip.

Instrument Insight: Commonly included in a rack with other delicate instruments for protection.

**Instrument:** CICHARELLI MASTOID RONGEUR

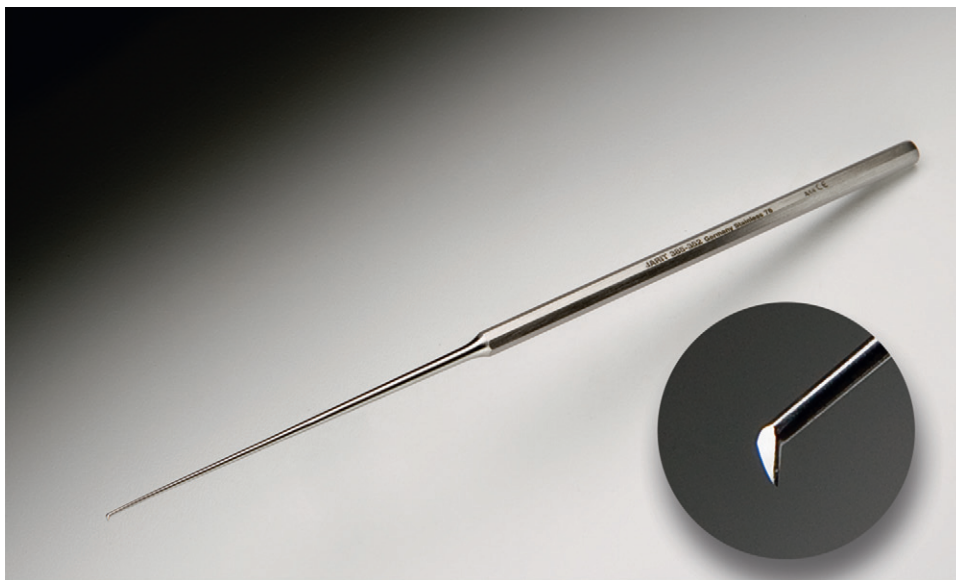
Other Names: Mastoid rongeur

Use(s): Used to cut and remove bone and air cells from the mastoid area.

Description: Small, single-action rongeur, which comes straight or angled.

Instrument Insight: This rongeur is often used in other specialties involving bone or tough tissue removal. Always have a moistened sponge

ready when handing the surgeon a rongeur. As the surgeon works to remove tissue and/or bone, the rongeur should be cleaned between uses. While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist should remove the tissue from the jaws of the rongeur.

**Instrument: HOUSE PICKS****Use(s):** Manipulate tissue in the middle ear.**Description:** Long handles with, 90° angle sharp tips.**Instrument Insight:** Commonly included in a rack with other delicate instruments for protection.**Instrument: HOUSE OVAL WINDOW PICK****Other Names:** House pick**Use(s):** Used for manipulating the soft tissue graft over the oval window during a stapedectomy.**Description:** Long handle with an angled, sharp, triangular tip.**Instrument Insight:** Commonly included in a rack with other delicate instruments for protection.



Instrument: HOUSE DOUBLE-ENDED CURETTES

Other Names: Ear curettes, small bone curettes

Use(s): Remove bone from the ear canal and middle ear.

Description: A double-ended curette with cutting cups of different sizes at the ends.

Instrument Insight: Commonly included in a rack with other delicate instruments for protection.

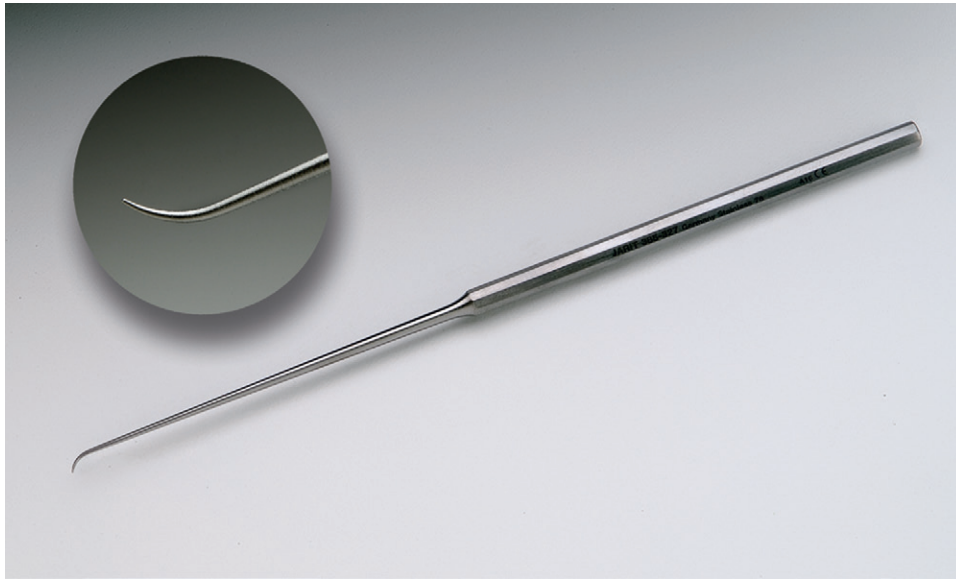


Instrument: BUECK EAR CURETTE

Other Names: Ring curette

Use(s): Removes bone and tissue from the ear canal and middle ear.

Description: Long handle with a blunt or sharp open-ringed tip.

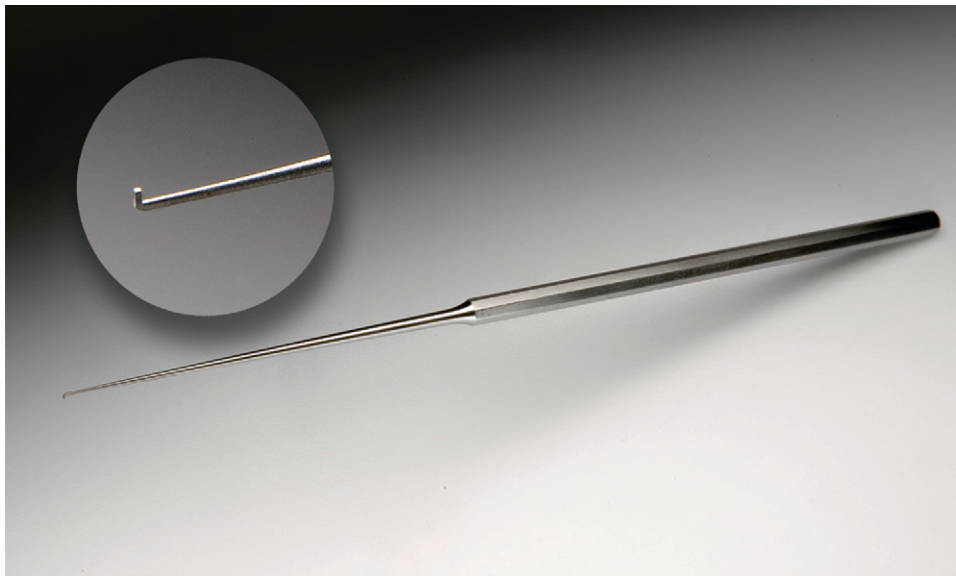
**Instrument:** ROSEN NEEDLE

Use(s): Used for manipulating tissue in the middle ear.

Description: Long handle with a curved tip that tapers to a blunt point.

Instrument Insight: The Rosen needle is not as sharp as the Barbara needle but is used for the same purposes.

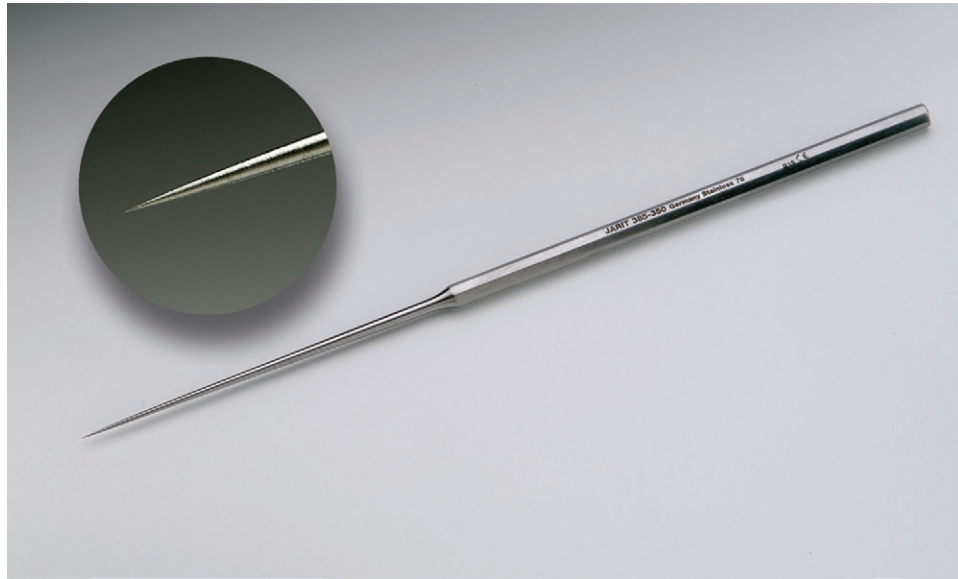
Instrument Insight: Commonly included in a rack with other delicate instruments for protection.

**Instrument:** HOUSE HOUGH

Use(s): Used for manipulating the ossicles and tissues in the middle ear.

Description: Long handle with a 90° blunt hooked tip.

Instrument Insight: Commonly included in a rack with other delicate instruments for protection.



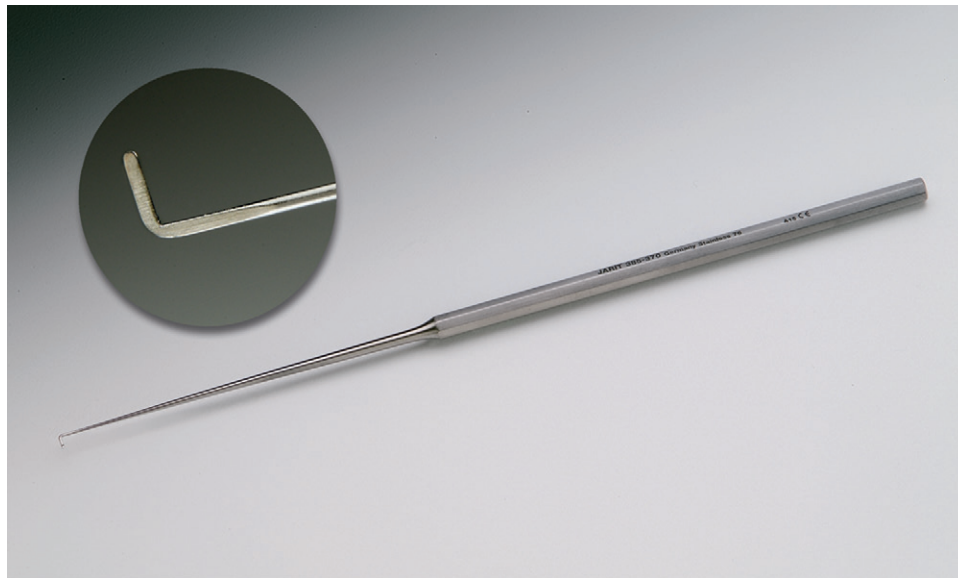
Instrument: HOUSE-BARBARA SHATTERING NEEDLE

Other Names: Barbara needle, shattering needle

Use(s): Used for manipulating tissue and ossicles in the middle ear. It also is used to fracture the superior portion of the stapes from the footplate during a stapedectomy.

Description: Long handle with a straight tip that tapers to a sharp point.

Instrument Insight: This instrument is sharper than a Rosen needle, but used for the same purpose. It is commonly included in a rack with other delicate instruments for protection.



Instrument: CRABTREE DISSECTOR

Other Names: Jimmy

Use(s): Used for manipulating ossicles and tissue in the middle ear.

Description: Long handles with a 90° blunt working tip.

Instrument Insight: Commonly included in a rack with other delicate instruments for protection.



Instrument: HOUSE STRUT HOOK

Other Names: Ditto

Use(s): Used for dissecting and removing ossicles from the middle ear.

Description: Long handles with 90° sharp tips.

Instrument Insight: Commonly included in a rack with other delicate instruments for protection.



Instrument: CAPLAN SCISSORS

Use(s): Used for cutting tissue within the nasal cavity.

Description: Double-action instrument with angled scissor blades and blunt tips.



Instrument: COTTLE ANGULAR SCISSORS

Other Names: Turbinate scissors, posterior scissors

Use(s): Used for trimming the turbinate (mucosal) tissue in the nose.

Description: Angled scissors with long, narrow, blunt blades.

Instrument Insight: These scissors come in small and medium sizes.



Instrument: BECKER SEPTUM SCISSORS

Use(s): Used for cutting tissue within the nasal cavity.

Description: Angled double-action scissors with straight, blunt-tip blades.



Instrument: KNIGHT ANGULAR SCISSORS

Other Names: Heymann-Knight angular scissors

Use(s): Used for cutting tissue within the nasal cavity.

Description: Angled scissors with narrow, blunt blades.

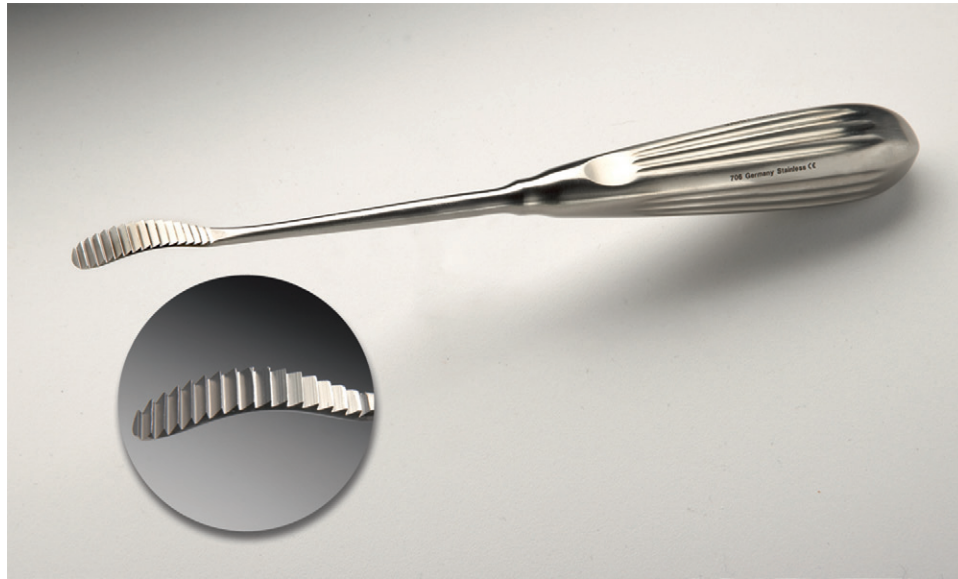
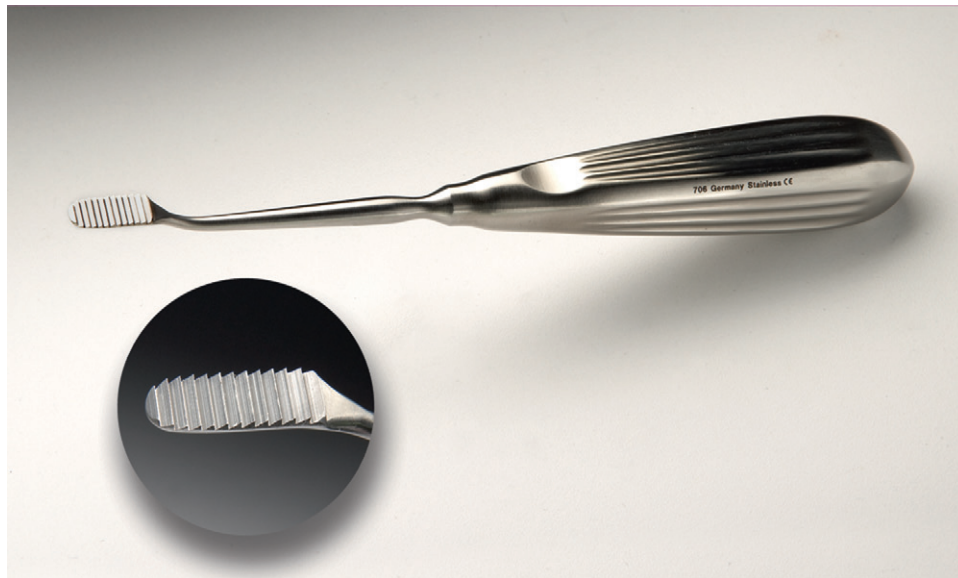


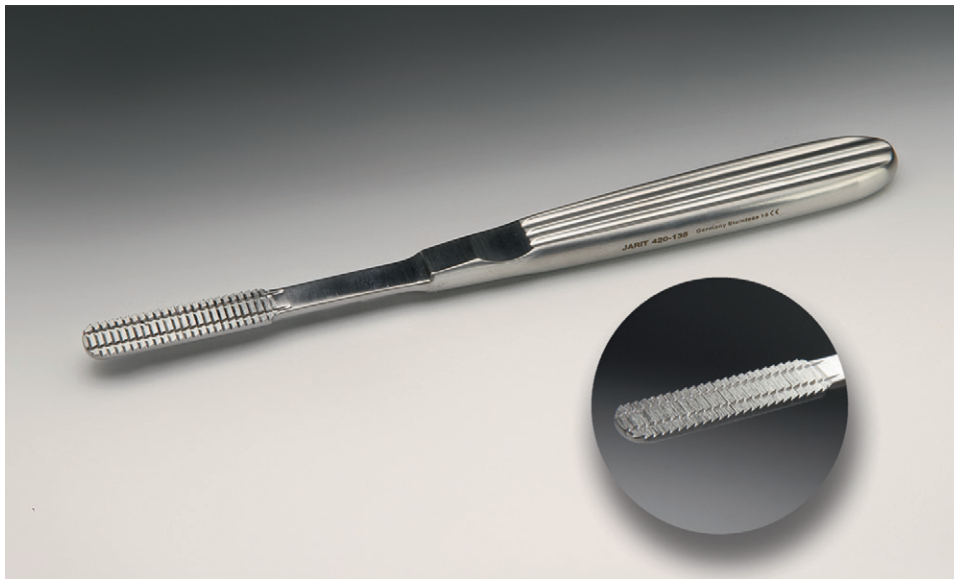
Instrument: JOSEPH SCISSORS

Use(s): Used for cutting fine tissue.

Description: Small, delicate, curved scissors with very sharp points.

Instrument Insight: Because of the sharp points, handle and pass with care.

**Instrument:** AUFRICHT NASAL RASPS**Use(s):** Used for filing hard tissue and bone.**Description:** This rasp is a round-handled instrument that has a rounded, slightly curved working end with sharp horizontal ridges.**Instrument Insight:** Bits of bone and tissue will accumulate in the ridges; clean the rasp by rinsing it in a small basin of water between uses.**Instrument:** LEWIS RASP**Use(s):** Used for filing hard tissue and bone.**Description:** This rasp is a round-handled instrument that has a rounded, straight working end with sharp horizontal ridges.**Instrument Insight:** Bits of bone and tissue will accumulate in the ridges; clean the rasp by rinsing it in a small basin of water between uses.



Instrument: MALTZ RASP

Other Names: Maltz-Lipsett

Use(s): Used for filing hard tissue and bone.

Description: Has rectangular sanding edge with horizontal and vertical ridges.

Instrument Insight: Bits of bone and tissue will accumulate in the ridges; clean the rasp by rinsing it in a small basin of water between uses.



Instrument: KERRISON RONGEUR

Other Names: Up-biter

Use(s): Used for biting off bone.

Description: Gripped handles with a 4-inch shaft and chisel-edge punch at the working tip. The punch tip is available in 3-, 4-, 5-, and 6-mm bites.

Instrument Insight: This rongeur can also have the biting edge positioned downward, called a

down-biter or back biter. Always have a moistened sponge ready when handing the surgeon a rongeur. As the surgeon works to remove tissue and/or bone, the rongeur has to be cleaned between uses. While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will clean the tissue from the jaws.



Instrument: KERRISON-COSTEN RONGEUR

Use(s): Used for biting off bone.

Description: This instrument is a variation of the Kerrison rongeur, but this rongeur has an angled arm and the cutting end is facing downward.

Instrument Insight: Always have a moistened sponge ready when handing the surgeon a rongeur.

As the surgeon works to remove tissue and/or bone, the rongeur has to be cleaned between uses. While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will clean the tissue from the jaws.

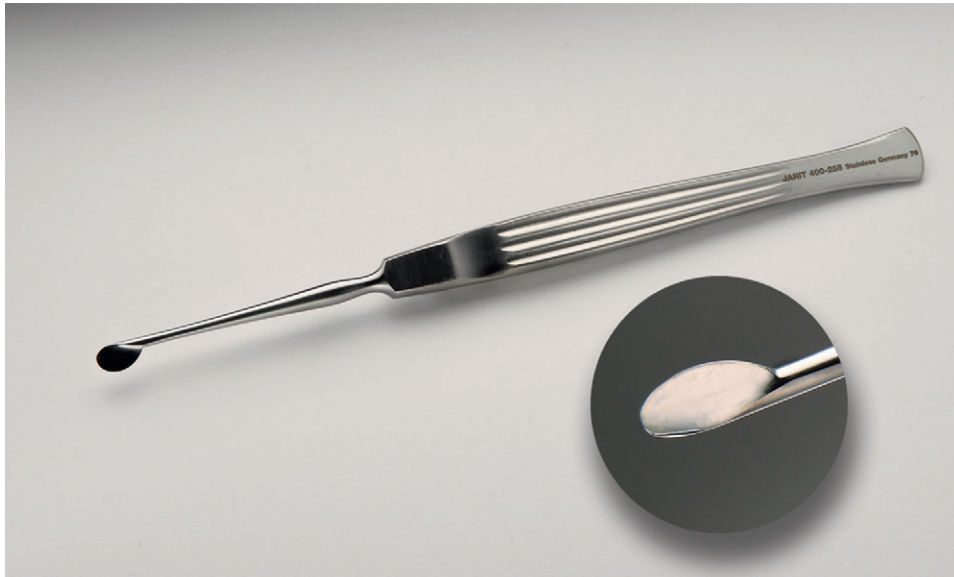


Instrument: BALLENGER SWIVEL KNIFE

Other Names: Swivel knife

Use(s): Used to cut and dissect nasal mucosa.

Description: Handled instrument with a hinged cutting tip for ease of application through nasal tissue.

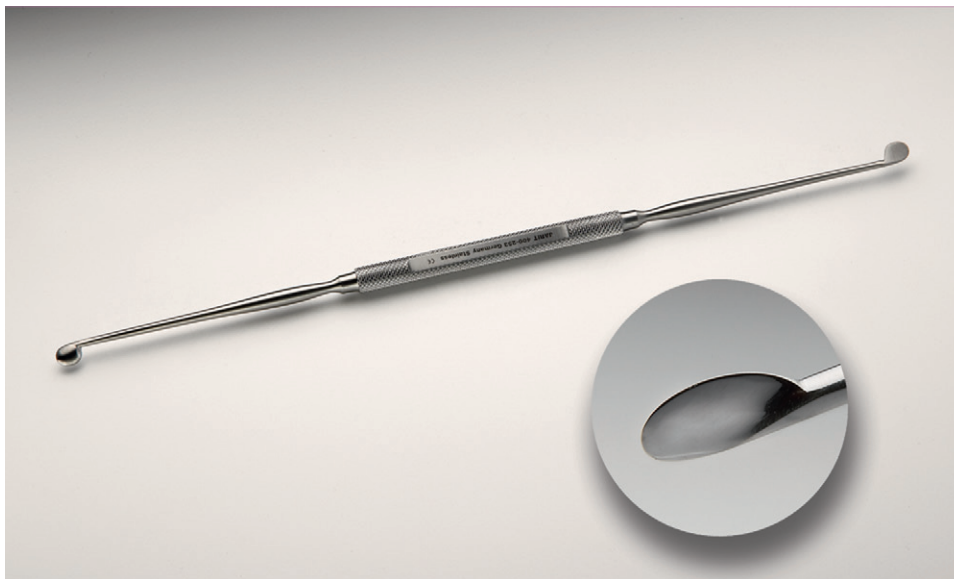
**Instrument: FREER SEPTUM KNIFE**

Other Names: Septal knife

Use(s): Used to cut and dissect septal mucosa.

Description: Flat-handled instrument with a rounded, sharp cutting end.

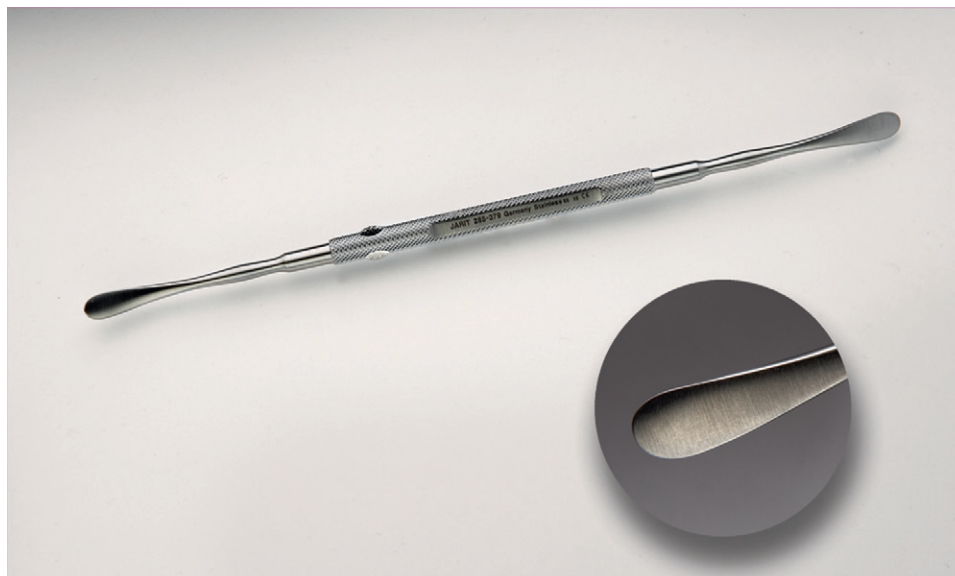
Instrument Insight: Commonly included in a tray or rack with other delicate instruments for protection.

**Instrument: PIERCE DOUBLE ENDED ELEVATOR**

Use(s): Cuts and dissects septal mucosa.

Description: A double-ended elevator with two rounded sharp blades at each end with one blade larger than the other.

Instrument Insight: Commonly included in a tray or rack with other delicate instruments for protection.



Instrument: FREER SEPTUM ELEVATOR

Other Names: Freer elevator

Use(s): The Freer used to dissect nasal mucosa from the septum.

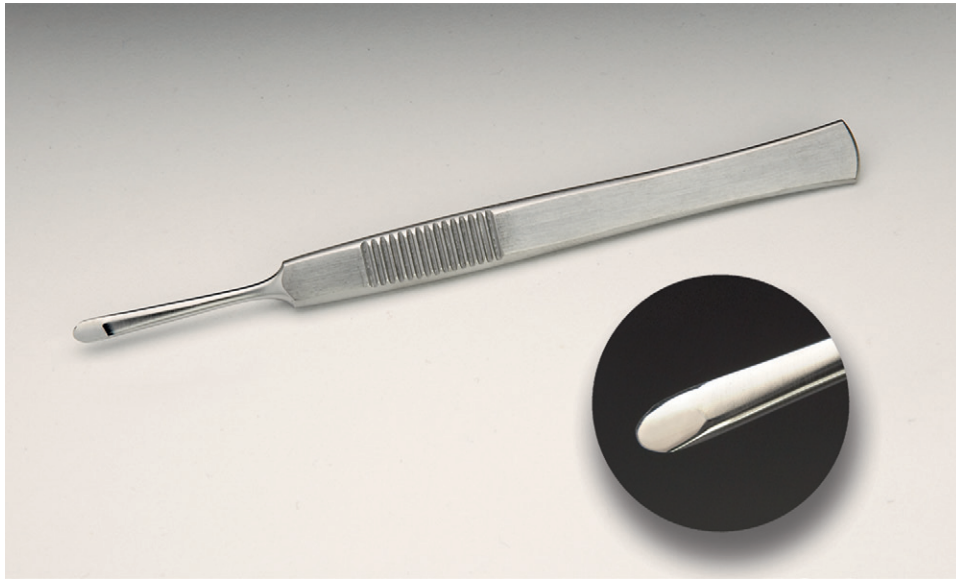
Description: Round handle with tear-shaped sharp tips at both ends.



Instrument: JOSEPH BUTTON-END KNIFE

Use(s): Used for dissecting nasal mucosa from the septum.

Description: Solid handled instrument with either an angled or a straight blade.

**Instrument: COTTLE NASAL KNIFE**

Use(s): Used for dissecting nasal mucosa from the septum.

Description: Flat-handled instrument with a smaller, flattened, sharp tip.

Instrument Insight: Commonly included in a tray or rack with other delicate instruments for protection.

**Instrument: COTTLE SEPTAL ELEVATOR**

Use(s): Used for cutting and dissecting nasal mucosa.

Description: Double-ended elevator with a flattened handle; one end is sharp and rounded while

the other end is sharp, flattened, and tear-shaped. The instrument has calibrations on both arms.

Instrument Insight: Commonly included in a tray or rack with other delicate instruments for protection.



Instrument: WIENER ANTRUM RASP

Other Names: Antrum rasp

Use(s): Used for creating an opening through the nasal wall to the maxillary sinus.

Description: Straight handle and shaft with a curved working end that has a sharp, encircling, raised serration and a trocar tip.



Instrument: COAKLEY ANTRUM CURETTES

Other Names: Nasal curettes

Use(s): Used for removing polyps and diseased sinus tissue.

Description: Round-handled instrument with a circular cutting tip that is available in different sizes and different angles.



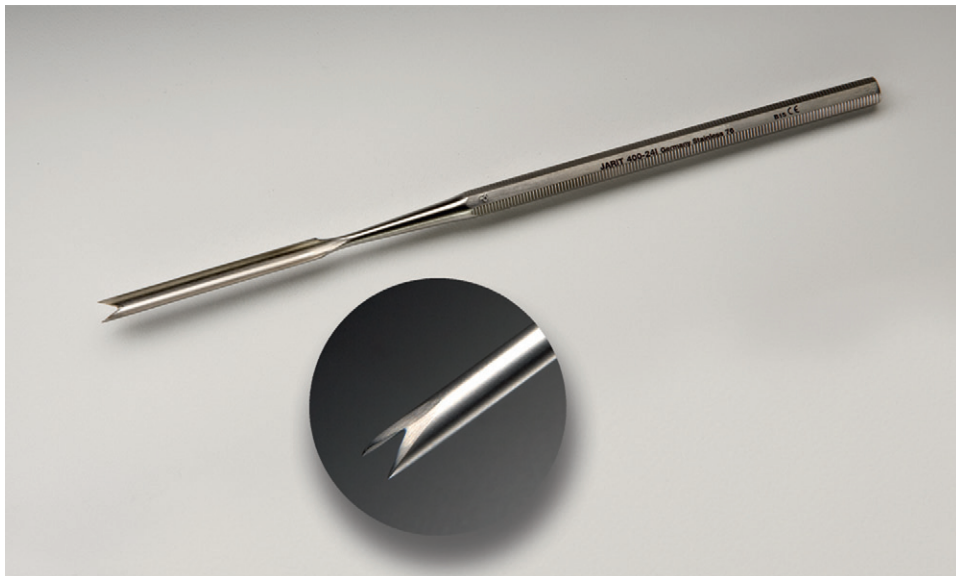
Instrument: NEIVERT-ANDERSON GUARDED OSTEOTOME

Use(s): Used for cutting bone.

Description: Flat-handled instrument with a tip beveled to a point for cutting. One side of the tip

extends out and is blunt, which acts as a guard. These osteotomes vary in width.

Instrument Insight: Always hand to the surgeon with a mallet.



Instrument: BALLENGER V-SHAPED OSTEOTOME

Use(s): Used for removing bone.

Description: Rounded handle with a V-shaped cutting edge.

Instrument Insight: This instrument is finer than other osteotomes but still requires a mallet for use.



Instrument: JANSEN-MIDDLETON SEPTUM FORCEPS

Use(s): Dissects and removes nasal tissues.

Description: Double-action angled instrument with oval cup jaws.

Instrument Insight: Tissues should be removed between uses with a moistened sponge.



Instrument: TAKAHASHI NASAL FORCEPS

Use(s): Used to grasp and remove nasal tissue and polyps.

Description: Handle with finger rings and a long shaft with an oval cup-shaped tip.

Instrument Insight: Tissues should be removed between uses with a moistened sponge.

**Instrument: WILDE ETHMOID FORCEPS**

Use(s): Used to remove infected or inflamed tissue that lines the nasal sinuses or to remove nasal polyps, especially in the ethmoid sinuses.

Description: Handle with finger rings, a long shaft, and an oval cup-shaped tip with fenestrations.

Instrument Insight: Instrument is available in straight and up-biting tips. Tissues should be removed between uses with a moistened sponge.

**Instrument: COTTLE OSTEOTOMES**

Use(s): Used for dissecting and sculpting bone.

Description: Solid stainless-steel strip with a smooth, inclining, sharp blade tip.

Instrument Insight: Always hand to the surgeon with a mallet.



Instrument: COTTLE CHISELS

Other Names: Nasal chisels

Use(s): Used for cutting bone.

Description: Solid stainless-steel strip that ends in a beveled, sharp tip.

Instrument Insight: Always hand to the surgeon with a mallet.



Instrument: CINELLI GUARDED OSTEOTOME

Use(s): Cuts bone.

Description: Solid stainless-steel strip with a widened blade that has a guard on each side.

Instrument Insight: Always hand to the surgeon with a mallet.



Instrument: BOETTCHER TONSIL SCISSORS

Other Names: Tonsil scissors

Use(s): Used for cutting tissue, especially in the oral pharynx for a tonsillectomy.

Description: Long, narrow, curved scissors with beveled outer blades.

Instrument Insight: These scissors are placed on the surgeon's fingers with the tips pointing downward.



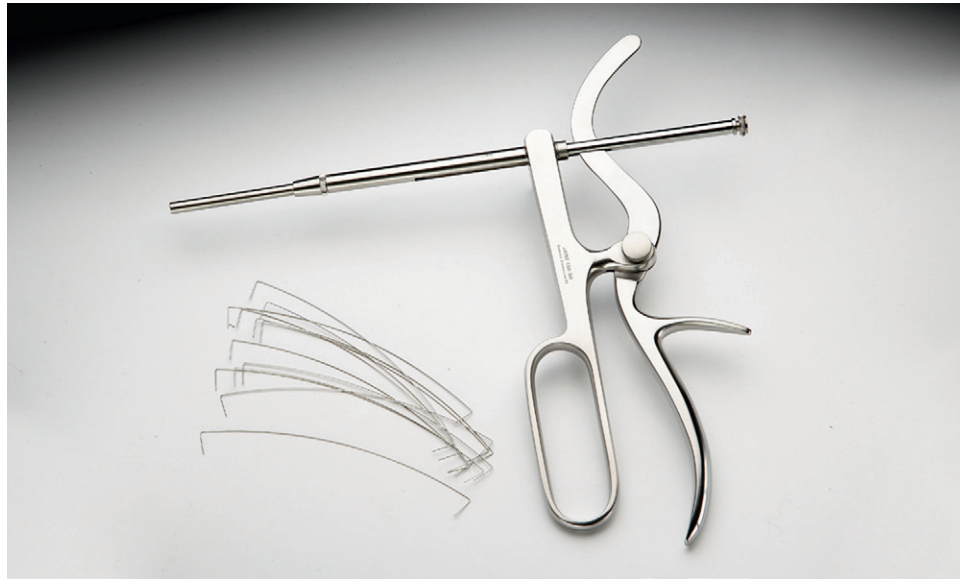
Instrument: MELTZER ADENOID PUNCH

Other Names: Punch

Use(s): Used for dissecting adenoids.

Description: Finger-ringed instrument with a long shaft and triangular sharp jaws that fit inside one another.

Instrument Insight: Tissue is removed with a moistened sponge between uses.

**Instrument: TONSIL SNARE**

Use(s): Snare wire is placed around the base of each tonsil, the handle is squeezed, and the wire is withdrawn into the cannula, severing the tonsil tissue through a guillotine action.

Description: A handle grip that attaches to a metal cannula and an inner sliding rod. The inner rod has two small holes at the tip in which the snare wires are loaded.

Instrument Insight: When loading the snare wires, expose the rod tip by opening the handles. The bent ends of the snare wire are then threaded into the holes. A slight compression of the handle then pulls the rough ends of the wire into the cannula, creating a loop. Wires become twisted and compressed after use; therefore they should be discarded and replaced with new ones.

**Instrument: BARNHILL ADENOID CURETTES**

Use(s): Used for removing adenoid tissue via a scraping action.

Description: Rounded handles with a curved, open frame that contains a cutting edge.

Instrument Insight: Instruments come in sets with various sizes.

GRASPING AND HOLDING INSTRUMENTS



Instrument: **McGEE WIRE CRIMPING FORCEPS**

Other Names: Crimper

Use(s): Used for ossicular reconstruction to clip or bend the wire on the stapes prosthesis.

Description: Small instrument with finger rings and delicate working tip for use through the ear canal and into the middle ear.

Instrument Insight: Instrument is delicate; do not drop or place heavier instruments on top of it. Keep its tip clean with an instrument wipe or dampened sponge.



Instrument: **WULLSTEIN EAR FORCEPS**

Other Names: Alligator forceps

Use(s): Used for manipulating and removing tissue from the ear canal and middle ear, inserting

aeration tubes, and placing Gelfoam packing when grafting.

Description: Small instrument with finger rings with tapered, serrated jaws.



Instrument: WALSHAM SEPTUM STRAIGHTENER

Use(s): This instrument is placed inside the nose, on both sides of the septum, to straighten a displaced nasal fracture.

Description: A single-action handle with a rounded jaw that extends to a flattened end approximately 1 inch on each side of the jaw.

Instrument Insight: The ends are rounded at the tip to prevent injury to the septum during insertion.



Instrument: RUBIN MORSELER

Use(s): Used to grasp and soften nasal cartilage for reinsertion into the septum.

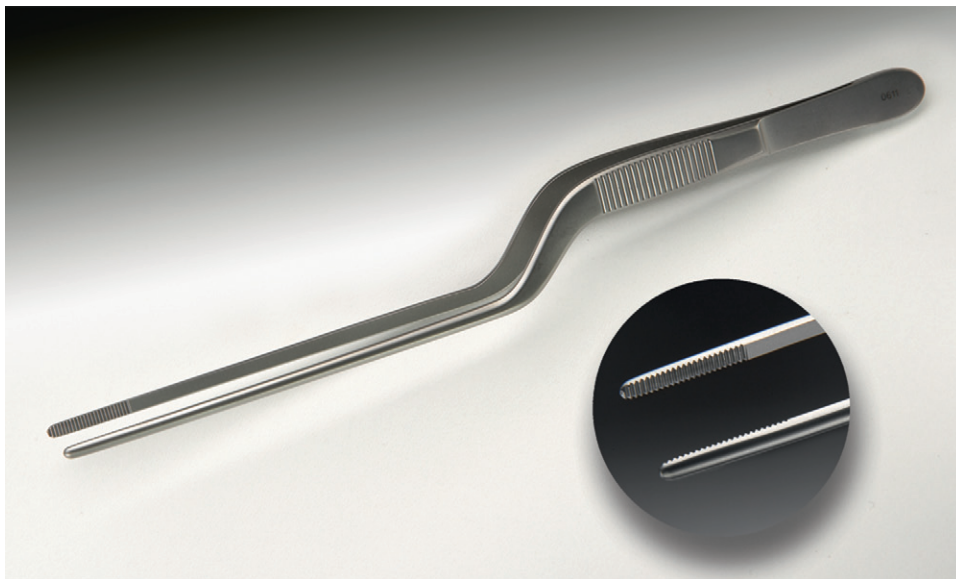
Description: Double-action instrument with a rectangular tip and cross-hatch serrations.



Instrument: BRUENING SEPTUM FORCEPS

Use(s): Used to grasp and hold nasal tissue.

Description: Instrument with finger rings and a cupped, perforated tip.



Instrument: JANSEN TISSUE FORCEPS

Other Names: Bayonet

Use(s): Used for grasping and manipulating tissue and placing packing or nasal splints.

Description: Long bayonet-shaped tissue forceps with serrated, round tips.

Instrument Insight: The bayonet has its curved shape to keep the instrument from getting in the surgeon's eyesight when in use.



Instrument: WILDE TISSUE FORCEPS

Other Names: Wilde dressing forcep

Use(s): Used for grasping and manipulating tissue and placing packing or nasal splints.

Description: Long, angled tissue forceps with serrated, round tips.



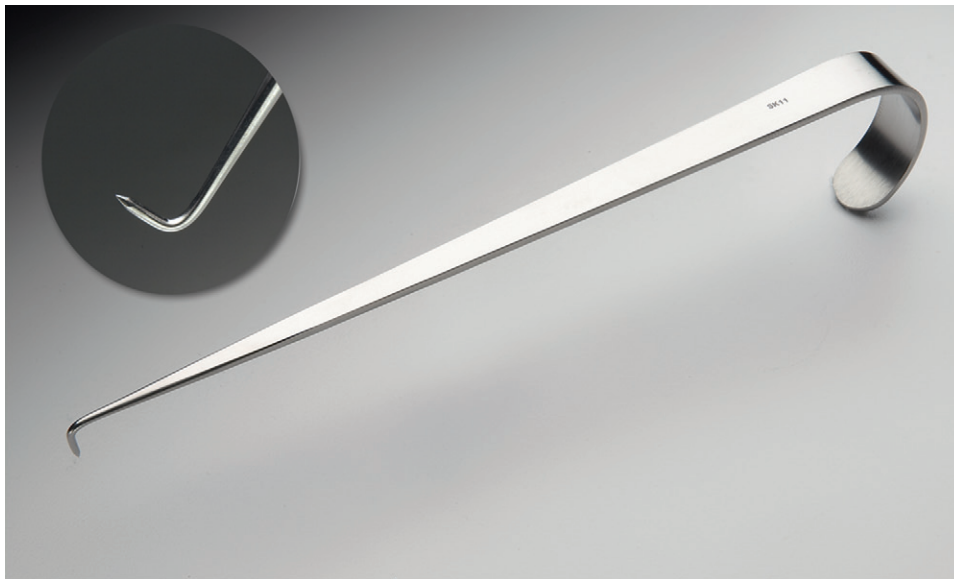
Instrument: CURVED ALLIS FORCEPS

Other Names: Tonsil grasper, tonsil forceps

Use(s): Used to grasp and hold tonsil tissue for removal.

Description: Finger-ringed instrument with one open ring, long shanks with curved jaws, and intertwining fine teeth at the tip.

Instrument Insight: The one ring is open so that, after the tissue is grasped, a suture may slide down the instrument and secure the tissue.



Instrument: HUPP TRACHEAL HOOK

Other Names: Trach hook

Use(s): Used to penetrate the trachea and pull it upwards during a tracheotomy.

Description: Retracting instrument with a curved handle for easy holding and a hooked, sharp end.

Instrument Insight: Use caution when handling to prevent puncture wounds on gloves or drapes.

RETRACTING AND EXPOSING INSTRUMENTS



Instrument: JANSEN MASTOID RETRACTOR

Use(s): Used for retracting a postauricular incision.

Description: A small self-retaining retractor with a screw-locking device at the proximal end that

holds it open and two small arms that have three sharp or blunt outward-curving prongs on the working end.



Instrument: COTTLE COLUMELLA FORCEPS

Other Names: Columella retractor

Use(s): Used for manipulating and retracts the nasal columella.

Description: Two-bladed, self-retaining instrument with a screw-down mechanism to hold arms in place.

Instrument Insight: This instrument fits onto the anterior part of the septum (columella), one blade positioned on each side, and screws down to lock.



Instrument: COTTLE NASAL SPECULUM

Use(s): Used for retracting the nares for visualization.

Description: A self-retaining instrument with double-bladed tips and a screw opening device. The speculum blades vary in length.



Instrument: VIENNA NASAL SPECULUM

Use(s): Used for retracting the nares for visualization.

Description: A manually held double-bladed instrument with concave tips. The speculum blades vary in length.



Instrument: KILLIAN NASAL SPECULUM

Use(s): Used for retracting the nares for visualization.

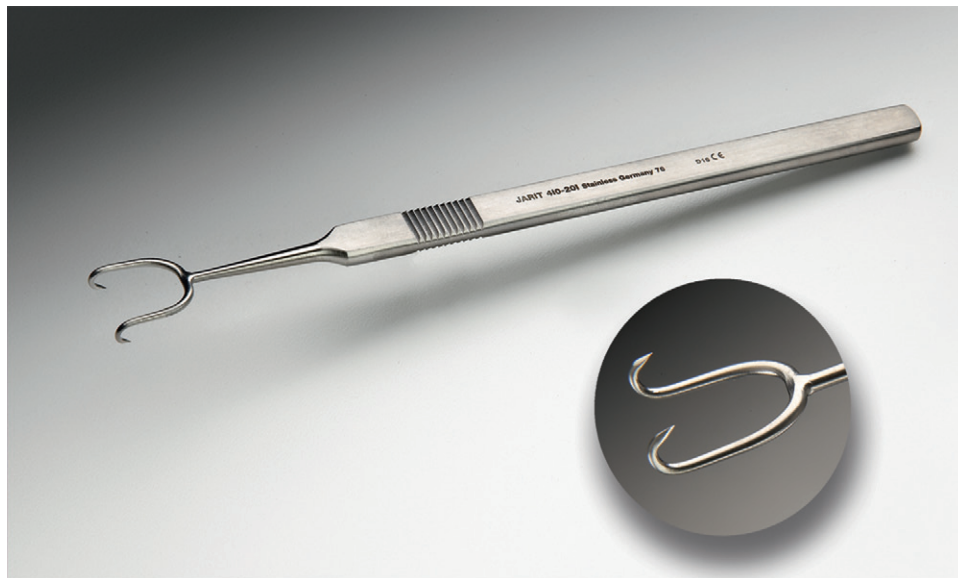
Description: A self-retaining instrument with double-bladed tips and a screw opening device. The speculum blades vary in length.



Instrument: COTTLE KNIFE GUIDE AND RETRACTOR

Use(s): Used for retracting the nares for visualization.

Description: Double-ended retractor with a small, blunt hook on one end and two, curved, ball-tip prongs on the other end.

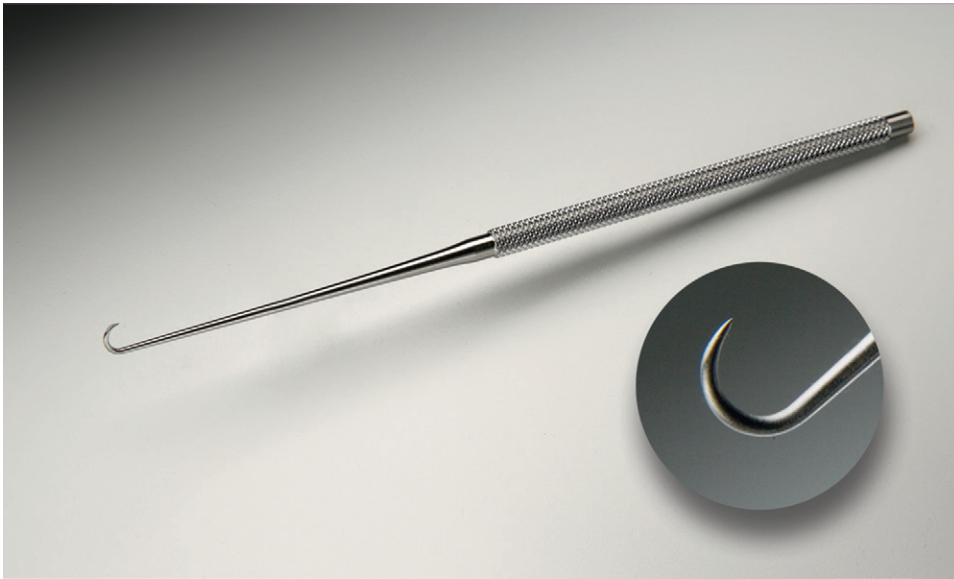


Instrument: COTTLE DOUBLE HOOK RETRACTOR

Use(s): Used for retracting the nares for visualization.

Description: Instrument with a flat handle and two sharp hooks.

Instrument Insight: Use caution not to perforate gloves or drapes with the sharp ends.



Instrument: JOSEPH SKIN HOOKS

Other Names: Single skin hook

Use(s): Used for retracting tissues.

Description: Round-handled instrument with a single, sharp, hooked end.



Instrument: AUFRICHT NASAL RETRACTOR

Use(s): Used for retracting the nares for visualization.

Description: Round-handled instrument with a right-angled, slightly concave, blunt blade at its end.



Instrument: WIEDER TONGUE BLADE

Other Names: Tongue depressor

Use(s): Used to depress and thus retract the tongue away from the operative site.

Description: Flat-handled instrument with a heart-shaped tip and three oval-shaped holes.



Instrument: LOTHROP UVULA RETRACTOR

Use(s): Used for retracting the uvula and soft palate.

Description: Angled retractor with a looped handle and a flattened end with a lip at the distal end for retracting the soft palate.

**Instrument: McIVOR MOUTH GAG**

Use(s): Used for retracting the mouth open and the tongue down for exposure of the oral cavity and the back of the throat.

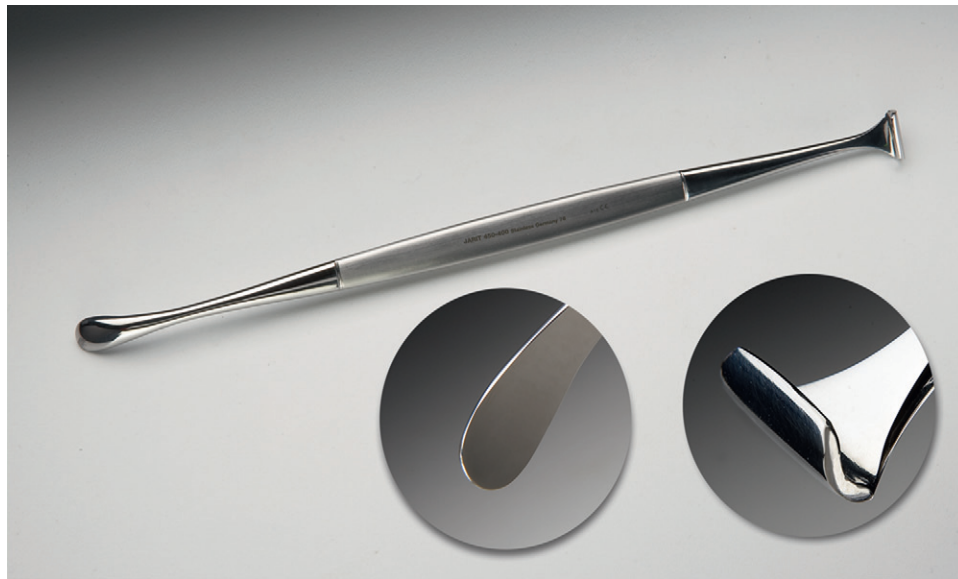
Description: Self-retaining loop-shaped frame retractor with an attachable tongue blade that slides onto the handle and has a ratchet for adjustment.

Instrument Insight: The mouth gag is available with three different-sized tongue blades. The hook end of the tongue blade slips over the edge of the Mayo stand to hold the patient in proper alignment for maximum exposure.

**Instrument: JENNINGS MOUTH GAG**

Use(s): Used for retracting the mouth open for exposure of the oral cavity and the back of the throat.

Description: A self-retaining eye-shaped retractor with ratchets.



Instrument: HURD DISSECTOR

Other Names: Herd elevator, pillar retractor

Use(s): Retracts the soft palate for oral procedures and dissects tonsil tissue.

Description: Flat-handled instrument with different ends: one is a rounded and slightly sharp end; the other curves into a lip.



Instrument: GREEN RETRACTOR

Other Names: Thyroid retractor

Use(s): Used for retracting tissue, particularly in the neck area.

Description: Loop-handled retractor with a curved, oval, blunt-looped end.



Instrument: TROUSSEAU TRACHEAL DILATOR

Other Names: Tracheal spreader

Use(s): Used for retracting the tracheal edges. This allows for placement of a tracheotomy tube.

Description: Finger-ringed handle with two blunt-angled ends that spread apart when the handle is compressed.

SUCTIONING AND ASPIRATING INSTRUMENTS



Instrument: BARON SUCTION TIPS

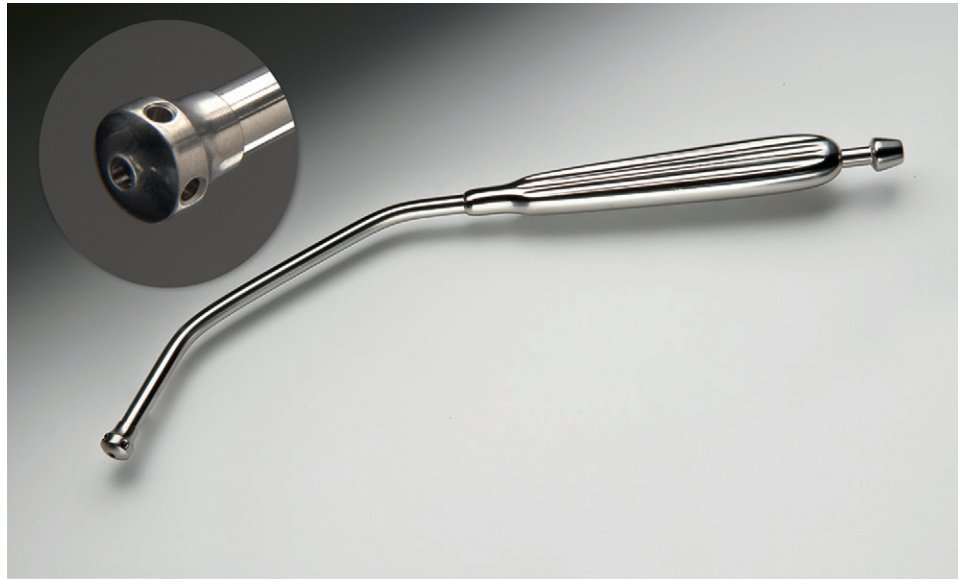
Other Names: Ear suction, finger-control suction

Use(s): Remove excess fluid and blood from the operative site.

Description: A small, angled, cylindrical tube with a relief opening/hole on the handgrip. The diameters are 3F, 5F, and 7F, and they are usually packaged with a metal stylet that fits inside the cylinder.

Instrument Insight: Suction can be increased by covering the relief opening. When the suction

tip becomes clogged with tissue and debris, the stylet is used to remove it, or a syringe with sterile water can be used to flush it. Be sure to place a finger over the opening when irrigating the tip. If the stylet is inadvertently left in the suction tip during the sterilization process, do not just remove the stylet and hand it off the field. The inside of the Baron tip and the stylet are considered unsterile, and both should be removed from the field.



Instrument: NONDISPOSABLE YANKAUER SUCTION TIP

Other Names: Oral tip, oral suction

Use(s): Used for evacuating of tissue, blood, and debris from the surgical site.

Description: A hollow, curved, stainless-steel tube with a ball tip and a grip handle.

Instrument Insight: Note the tip of the suction is removable for cleaning. Make sure the tip is securely tightened before and after the procedure.

VIEWING INSTRUMENTS



Instrument: BOUCHERON EAR SPECULUM

Use(s): Used for opening the ear canal for exposure of the tympanic membrane and portions of the middle ear.

Description: A bell-shaped speculum with a round opening; available in a set of varying sizes.

Instrument Insight: The size of the speculum is determined by the size of the patient's ear canal.

**Instrument: FARRIOR EAR SPECULUM**

Use(s): Used for opening the ear canal for exposure of the tympanic membrane and portions of the middle ear.

Description: A bell-shaped speculum with an oval opening; available in a set of varying sizes.

Instrument Insight: The size of the speculum is determined by the size of the patient's ear canal.

Oral Instruments

ACCESSORY INSTRUMENTS



Instrument: MOUTH MIRROR

Other Names: Dental mirror, Laryngeal mirror

Use(s): Used for visualization of the mouth, including the teeth, gums, tongue, palate, and cheeks.

Description: The mouth mirror is a round-handled instrument with a small rounded mirror on the end. Mirrors are available in different diameters.

Instrument Insight: Mirror may fog when inserted into the oral cavity; the mirrors are dipped into some type of antifog solution or possibly warm water. Some oral surgeons will use the patient's saliva to prevent fogging of the mirrors.

**Instrument: ARCH BARS**

Use(s): Arch bars are used to manage a fracture of the mandible (jaw). A set of arch bars are placed with wires that will easily conform to the natural arch of the teeth. The arch bars are ideal to maintain a patient's natural bite in a stationary position until the patient's bone heals.

Description: These appliances are rigid metal strips that have hooks in which wire is applied around both the top and bottom and twisted.

Instrument Insight: The hooks on the arch bars are placed downward on the lower teeth and upward on the upper teeth.

CUTTING AND DISSECTING INSTRUMENTS

**Instrument: POTTS ELEVATOR**

Other Names: T-bar Potts elevators

Use(s): To loosen tooth or root from bony socket before use of the extraction forceps.

Description: The working end is right or left curve with a rounded tip in a range of sizes.

Handles may be either T-bar style or a design of heavy tapering to the working end.

Instrument Insight: These are in the set as right and left pairs.

**Instrument: CRANE ELEVATOR****Other Names:** Angular elevator, root tip pick**Use(s):** To loosen tooth or root from bony socket before use of the extraction forceps.**Description:** The working end has an upward angle with a pointed tip. Handles may be either T-bar style or a design with heavy tapering to the working end.**Instrument: CRYER ELEVATOR****Other Names:** Flag elevators, root elevators**Use(s):** To loosen tooth or root from bony socket before use of the extraction forceps.**Description:** The working end is right or left with a triangular pointed tip in a range of sizes.

Handles may be either T-bar style or a design with heavy tapering to the working end.

Instrument Insight: These are in the set as right and left pairs.

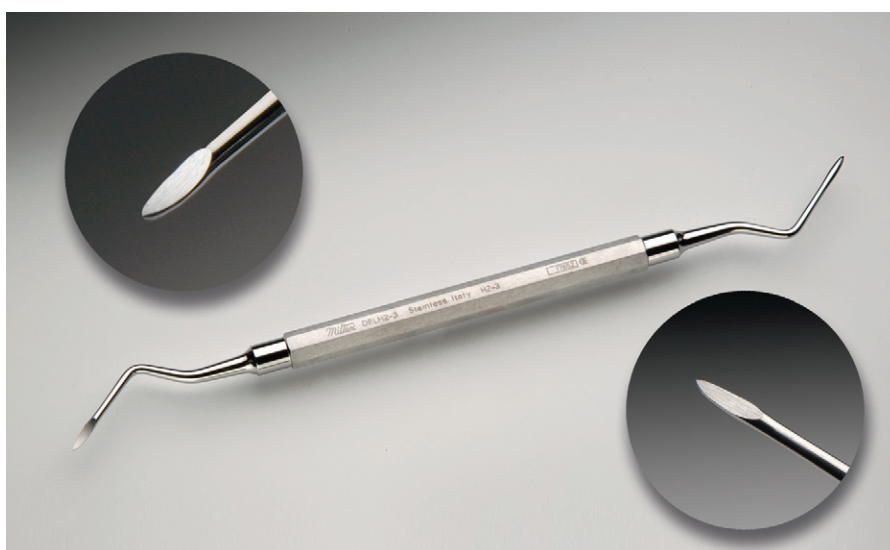
**Instrument: APICAL ELEVATOR**

Other Names: Straight elevator, luxating elevator

Use(s): To loosen tooth or root from bony socket before use of the extraction forceps.

Description: A round trough-like tip in a range of sizes with a heavy rounded tapering handle.

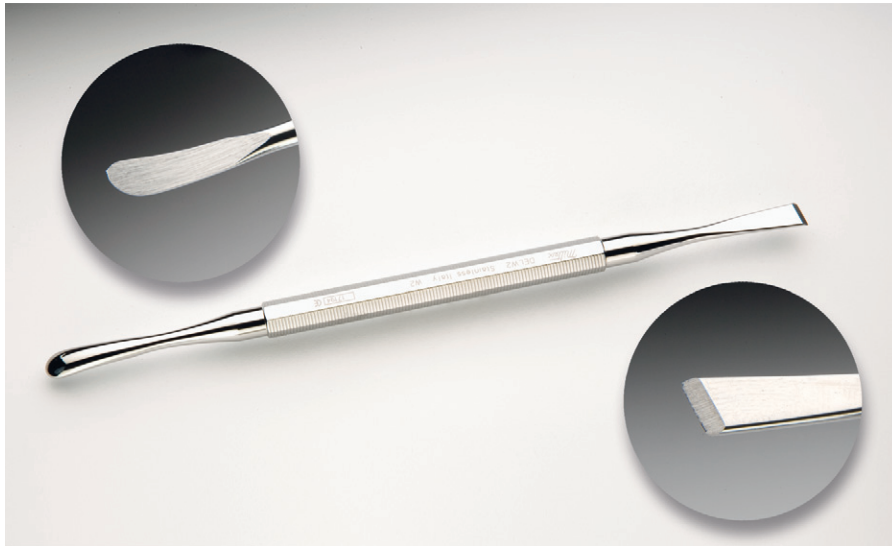
Instrument Insight: Common sizes are number 1, 34, and 301; these are often referred to by number.

**Instrument: ROOT TIP PICK**

Other Names: Angle pick, dental pick

Use(s): Used to retrieve loose root fragments from the socket after an extraction.

Description: Double-ended small elevator with thin, angled pointed tip on one end and a blunt tip on the other.



Instrument: WEST PERIOSTEAL

Other Names: Periosteal elevator

Use(s): Primarily are used to retract gingival tissue; also used during an incisional extraction to remove soft tissues from the tooth.

Description: Double-ended straight instrument with one curved, round end and one chisel-like end.



Instrument: LUCAS BONE CURETTE

Other Names: Angled curette

Use(s): Often used after tooth extractions to make sure debris and tissue are removed from the socket.

Description: Angular double-ended, angled, spoon-shaped scraping instrument in a range of sizes.

**Instrument: MOLT BONE CURETTE**

Other Names: Surgical curette, straight curette

Use(s): Often used to remove tissue or debris from bony sockets.

Description: Double-ended, straight instrument with round working ends that are graduated in size. These come in a range of sizes.

**Instrument: KELLY SCISSORS**

Other Names: Tissue scissors

Use(s): Used for cutting and excising excess or diseased soft tissue.

Description: Fine curved tip blades.

Instrument Insight: These are tissue scissors and should not be used to cut other items, which will dull the blades and make them unsafe for patient use.



Instrument: DEAN SCISSORS

Other Names: Right-angle scissors

Use(s): Used for cutting and excising excess or diseased soft tissue.

Description: Fine right-angle blades with a sharp tip.

Instrument Insight: These are tissue scissors and should not be used to cut other items, which will dull the blades and make them unsafe for patient use.



Instrument: SPENCER SUTURE SCISSORS

Other Names: Suture scissors

Use(s): These scissors are used to cut suture intraoperatively and to remove suture post-operatively.

Description: Fine scissors with straight blades.

Instrument Insight: One blade has a hook-like tip to slip under suture to hold suture away from tissue while cutting.

GRASPING AND HOLDING INSTRUMENTS



Instrument: LEFT UPPER MOLAR EXTRACTION FORCEPS (88L)

Other Names: Maxillary left forceps, No. 88L, 88L

Use(s): Used for extracting the left first and second maxillary molars.

Description: The tip has a bayonet design with one sharp projection on one jaw and two projections on the other. Each tip is designed to adjust to anatomical differences of the molar roots on

the facial and lingual sides of the socket. The handles are straight and have nonslip diamond-cut grips.

Instrument Insight: The two prongs are placed on the palate side of the tooth, and the one prong is placed on the cheek side. Extraction forceps are often asked for by number instead of by proper name.



Instrument: RIGHT UPPER MOLAR EXTRACTION FORCEPS (88R)

Other Names: Maxillary right forceps, No.88R, 88R

Use(s): Used for extracting the right first and second maxillary molars.

Description: The tip has a bayonet design with one sharp projection on one jaw and two projections on the other. Each tip is designed to

adjust to anatomical differences of the molar roots on the facial and lingual sides of the socket. The handles are straight and have nonslip diamond-cut grips.

Instrument Insight: The two prongs are placed on the palate side of the tooth, and the one prong is placed on the cheek side. Extraction forceps are often asked for by number instead of by proper name.



Instrument: LOWER MOLAR EXTRACTION FORCEPS (17)

Other Names: Mandibular forceps (17), #17

Use(s): Used for extracting the first and second maxillary molars of the right and left quadrants.

Description: The jaws are curved with an oval cup-shaped trough on the inner aspect and one sharp projection in the middle of the tip. The

tips are universal in design to conform to facial and lingual roots for both the right and left sides. The handles are straight and have nonslip diamond-cut grips.

Instrument Insight: The #17 is handed with the tip curved downward. Extraction forceps are often asked for by number instead of by proper name.



Instrument: UPPER ANTERIOR EXTRACTION FORCEPS (150)

Other Names: Maxillary universal forceps, Cryer forceps, 150

Use(s): Used for extracting the maxillary centrals, laterals, cuspids, premolars, and roots of the right and left quadrants.

Description: The jaws are curved with an oval cup-shaped trough on the inner aspect. The

tips are universal in design to conform to facial and lingual roots for both the right and left sides. The handles are curved and have nonslip diamond-cut grips.

Instrument Insight: Maxillary counterpart to the #151 mandibular Cryer forceps; these should be placed on the Mayo together. Extraction forceps are often asked for by number instead of by proper name.



Instrument: LOWER ANTERIOR EXTRACTION FORCEPS (151)

Other Names: Mandibular universal forceps, Cryer forceps, 151

Use(s): Used for extracting the mandibular centrals, laterals, cuspids, premolars, and roots of the right and left quadrants.

Description: The jaws are curved with an oval cup-shaped trough on the inner aspect. The tips

are universal in design to conform to facial and lingual roots for both the right and left sides. The handles are curved and have nonslip diamond-cut grips.

Instrument Insight: Mandibular counterpart to the maxillary #150 Cryer forceps; these should be placed on the Mayo together. Extraction forceps are often asked for by number instead of by proper name.

RETRACTING AND EXPOSING INSTRUMENTS



Instrument: MINNESOTA CHEEK RETRACTOR

Other Names: Cheek retractor, University of Minnesota retractor, Cawood retractor

Use(s): To retract the tongue and cheek away from surgical site.

Description: A curved bent and angled ribbon of stainless steel.



Instrument: MOLT MOUTH GAG

Other Names: Mouth gag, prop

Use(s): To retract the mouth open during procedures.

Description: Self-retaining C-shaped retractor with blades that curve inward and ratcheted

finger rings to hold it in place. The rubber tubing slides onto the blades to protect the teeth and soft tissue.



Instrument: MOUTH PROP

Other Names: Bit block, bit wedge

Use(s): To keep mouth propped open during procedures.

Description: A rubber wedge that has a rim on both sides into which the upper and lower teeth

fit. The mouth prop comes in four sizes for children and adults. The attached chain is for removal of the wedge.

Instrument Insight: The narrow end of the wedge is placed into the mouth first.



Instrument: ANDREWS'S TONGUE
DEPRESSOR

Category: Retracting and exposing

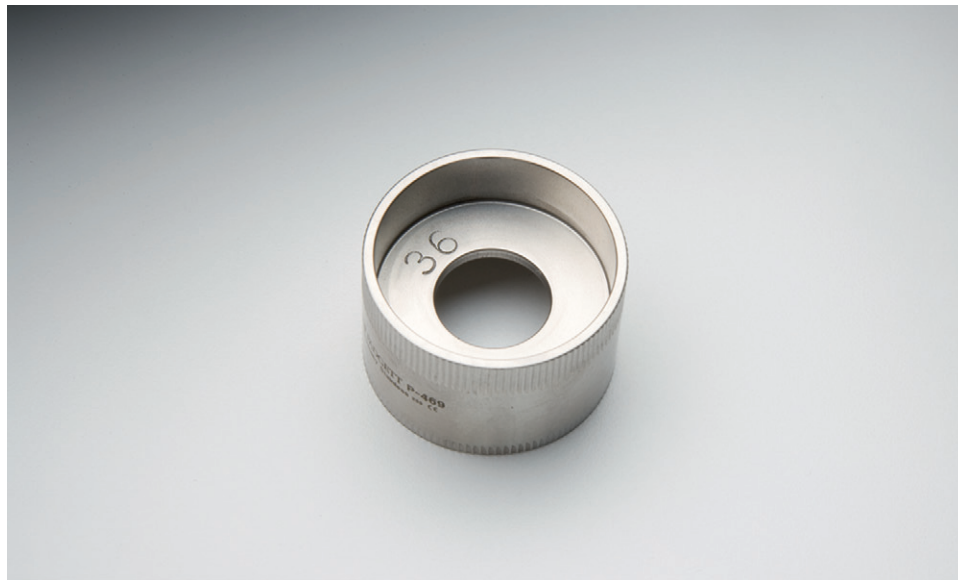
Other Names: Tongue blade

Use(s): Used for retracting the mouth open and the tongue down for exposure of the oral cavity and the back of the throat.

Description: Flat-handled right-angle retractor with a round horizontal serrated blade.

Plastic and Reconstructive Instruments

ACCESSORY INSTRUMENTS



Instrument: AREOLA MARKER

Other Names: Cookie cutter, nipple washer

Use(s): Used for marking an incision line around the areola for a reduction mammoplasty and for marking tissue to become the new areola during reconstruction mammoplasty.

Description: The areola marker is a circular tube with a flat metal ring in the center. These range in size from 24 to 50 mm in diameter.

Instrument Insight: The breast incisions are commonly marked preoperatively with the patient standing. Always have sterile areola markers and marking pen available for marking the new areola site during the procedure.



Instrument: McKISSOCK KEYHOLE

Other Names: Reduction marker

Use(s): Used for marking the incision outline for a reduction mammoplasty.

Description: A heavy, stainless-steel wire shaped like a keyhole.

Instrument Insight: The breast incisions are commonly marked preoperatively with the patient standing. Always have a sterile keyhole and marking pen available during the procedure.

CUTTING AND DISSECTING INSTRUMENTS



Instrument: DERMAMESHER

Other Names: Skin mesher

Use(s): Used for expansion of a split-thickness skin graft.

Description: A hand-cranked roller-cutting device that creates numerous identical perforations in

the skin graft, giving it a mesh appearance.

Meshing facilitates fluid drainage and allows the graft to be stretched over a larger surface area.

Instrument Insight: Depending on the type and manufacturer, some meshers use a skin carrier and others take only skin.

**Instrument: DERMATOME****Other Names:** Paget dermatome**Use(s):** Used for harvesting a split-thickness skin graft.**Description:** A power-driven dermatome that uses electricity or compressed gas to move the blade side to side to attain a skin graft. This set includes the dermatome hand piece; power cord; 1-, 2-, and 3-inch width plates; calibration guide; and screwdriver. The dermatome blades are manufacturer packaged for one-time use. There are several manufacturers of mechanical dermatomes.**Instrument Insight:** Attaching the blade onto the back of the hand piece assembles the

dermatome. The width plate is then placed over the blade by lining up the outer holes with the screws on the hand piece. After this is completed, the plate is slid forward and locked in place by tightening the screws.

⚠ CAUTION: Before handing this instrument to the surgeon, the dermatome should always be connected to power and tested to ensure the blade is moving freely. Always have sterile mineral oil and tongue blades available for lubrication and tension at the donor site. The skin should be held taut while the dermatome is cutting.

**Instrument: DERMATOME BLADE****Other Names:** Paget blade**Use(s):** Used for harvesting a split-thickness skin graft.**Description:** Disposable rectangular-shaped razor blade.**Instrument Insight:** The blade attaches onto the back of the hand piece with the bevel down. The

dermatome blades are manufacturer packaged for one-time use.

⚠ CAUTION: The hand piece should always be tested after being assembled to verify the blade is moving properly.



Instrument: WATSON SKIN GRAFT KNIFE

Other Names: Humby

Use(s): Used for harvesting a split-thickness skin graft or for wound debridement.

Description: A handheld dermatome with adjustable roller, which determines the depth

of the graft. The blade is manufacturer packaged for one-time use.

Instrument Insight: The blade is attached with the bevel up.



Instrument: IRIS SCISSORS

Use(s): Cut tissues during fine dissection.

Description: Small curved or straight scissors with fine blades and sharp tips.

Instrument Insight: Straight iris scissors are sometimes used to cut very delicate sutures. Curved scissors are for tissue dissection only.

CAUTION: Never place heavy instruments on top of delicate scissors. Never use curved delicate scissors for anything other than delicate tissue dissection because they will dull quickly.



Instrument: KAYE FACELIFT SCISSORS

Other Names: Lift scissors

Use(s): Used for cutting and dissecting tissue during a rhytidectomy.

Description: A fine scissors with curved, beveled blades and blunt tips.



Instrument: LITTLER PLASTIC SURGERY SCISSORS

Other Names: Litler's

Use(s): To cut tissues during fine dissection.

Description: Fine scissors with curved, smooth blades and a single small hole close to the blunt tip.

Instrument Insight: Holes on blades serve as suture carrier.



Instrument: STEVENS TENOTOMY SCISSORS

Use(s): To cut tissues during fine dissection.

Description: Small scissors with straight or slightly curved fine blades that narrow to blunt tips.



Instrument: JAMISON SCISSORS

Use(s): Cut tissues during fine dissection.

Description: Small scissors with curved elongated blades that narrow to blunt tips.

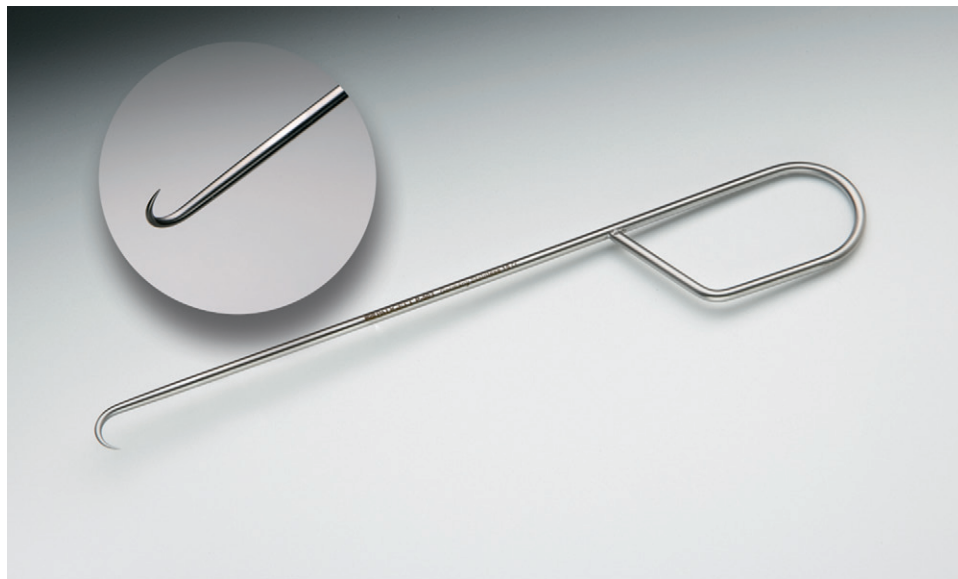


Instrument: REYNOLDS SCISSORS

Use(s): To cut tissues during fine dissection.

Description: Small scissors with curved, widened blades that narrow to blunt tips.

RETRACTING AND EXPOSING INSTRUMENTS



Instrument: MAMMOPLASTY HOOK

Other Names: Breast hook

Use(s): Used for retracting breast tissue during mastectomy or mammoPlasty.

Description: A heavy, sharp hook retractor with a wire handle.

Instrument Insight: Always hand to the surgeon with the hook pointed downward.

CAUTION: Care must be taken not to puncture gloves on the sharp point of the hook.

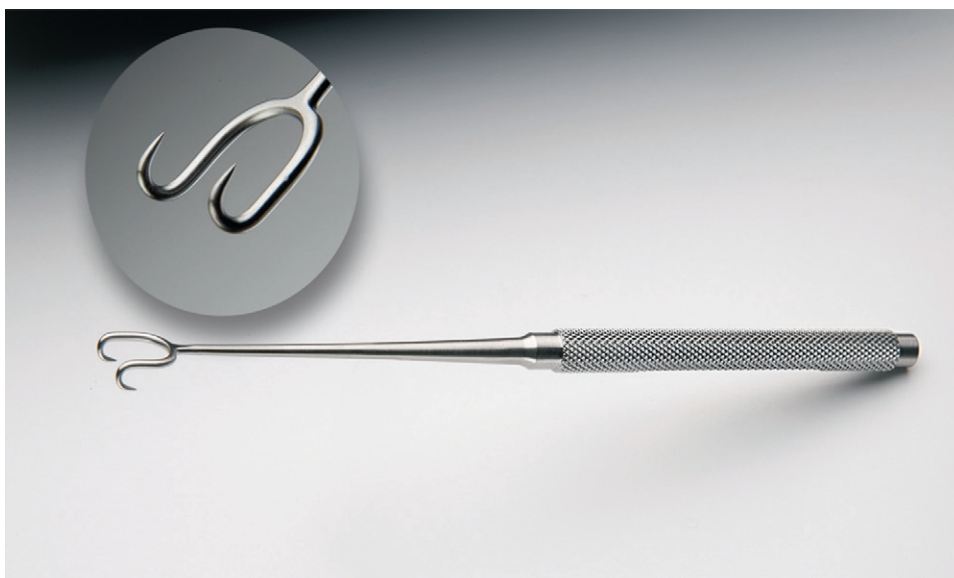
**Instrument: JOSEPH SINGLE SKIN HOOK**

Use(s): Used for retracting skin edges of small wounds.

Description: A small, sharp hook retractor with a round grip handle.

Instrument Insight: Hand to surgeon with hook pointing downward.

CAUTION: Care must be taken not to puncture gloves on the sharp point of the hook.

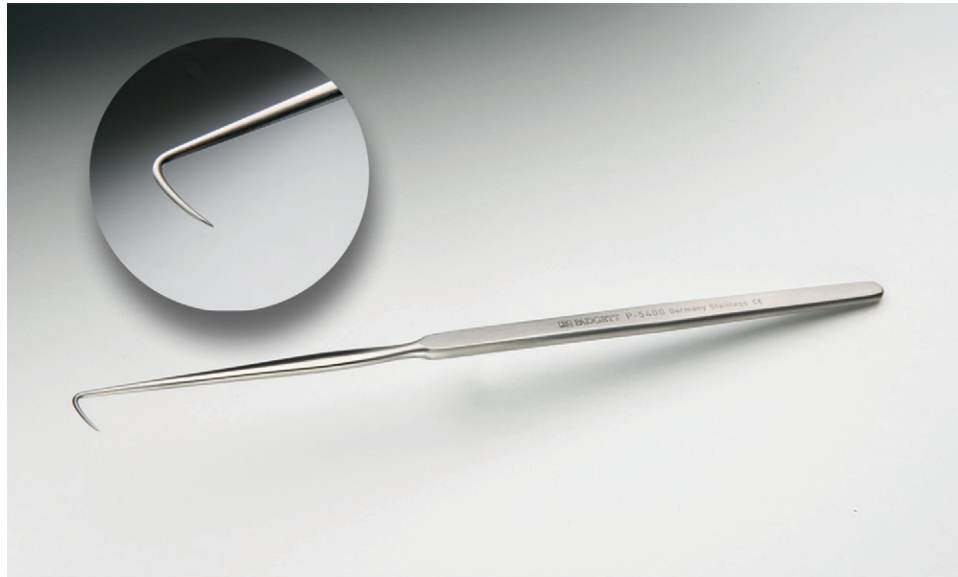
**Instrument: JOSEPH DOUBLE SKIN HOOK**

Use(s): Used for retracting skin edges of small wounds.

Description: A small, sharp double hook retractor with a round grip handle.

Instrument Insight: Hand to surgeon with hooks pointing downward.

CAUTION: Care must be taken not to puncture gloves on the sharp point of the hooks.



Instrument: SINGLE COTTLE TENACULUM

Use(s): Used for retracting skin edges and deeper tissues of small incisions.

Description: A small, sharp, L-shaped hook retractor with a flattened handle.

Instrument Insight: Hand hook downward.

CAUTION: Care must be taken not to puncture gloves on the sharp point of the hook.



Instrument: DOUBLE COTTLE TENACULUM

Other Names: Tenaculums, hooks

Use(s): Used for retracting skin edges and deeper tissues of small incisions. Often used during nasal procedures.

Description: Sharp, double hook retractor with a flattened, ridged handle.

Instrument Insight: Hand hooks downward.

CAUTION: Care must be taken not to puncture gloves on the sharp point of the hooks.

**Instrument: MATHIEU RETRACTOR**

Other Names: Cat paw

Use(s): Used for retracting skin edges and shallow wound edges.

Description: The Mathieu is a double-ended handheld retractor. One end has three sharp or blunt curved prongs, and the other end is a flat, laterally bent narrow strip.

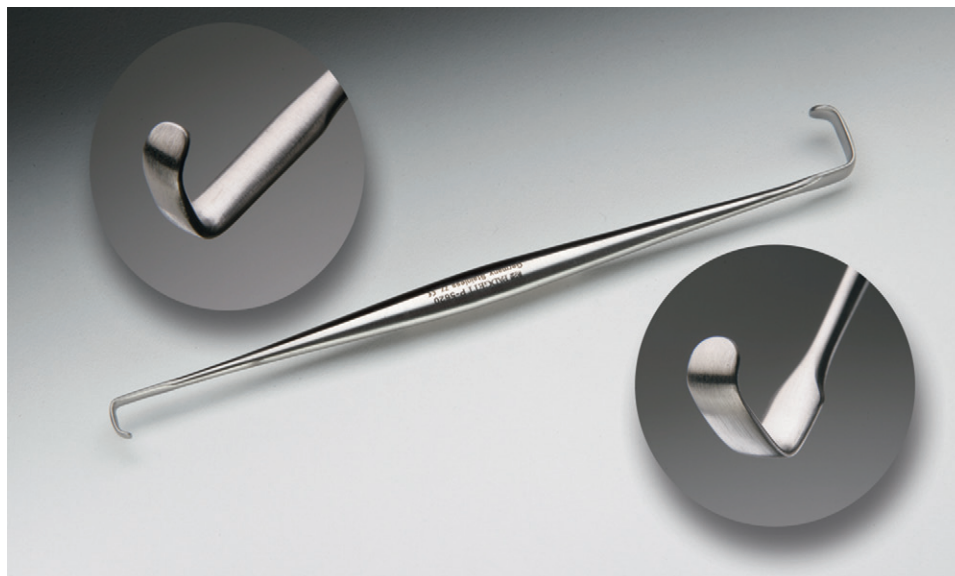
Instrument Insight: The Mathieu is often confused with the Senn retractor, but it is actually finer than the Senn. Hand with the prongs downward.

⚠ CAUTION: Care must be taken not to puncture gloves on the sharp point of the prongs.

**Instrument: MEYERDING FINGER RETRACTOR**

Use(s): Used for retracting small wounds.

Description: Laterally bent narrow, flat end with a curved lip and a finger ring handle.



Instrument: RAGNELL RETRACTOR

Use(s): Used to retract superficially and then deeper in a small wound.

Description: Flattened, laterally curved, double-ended retractor with one end larger than the other.

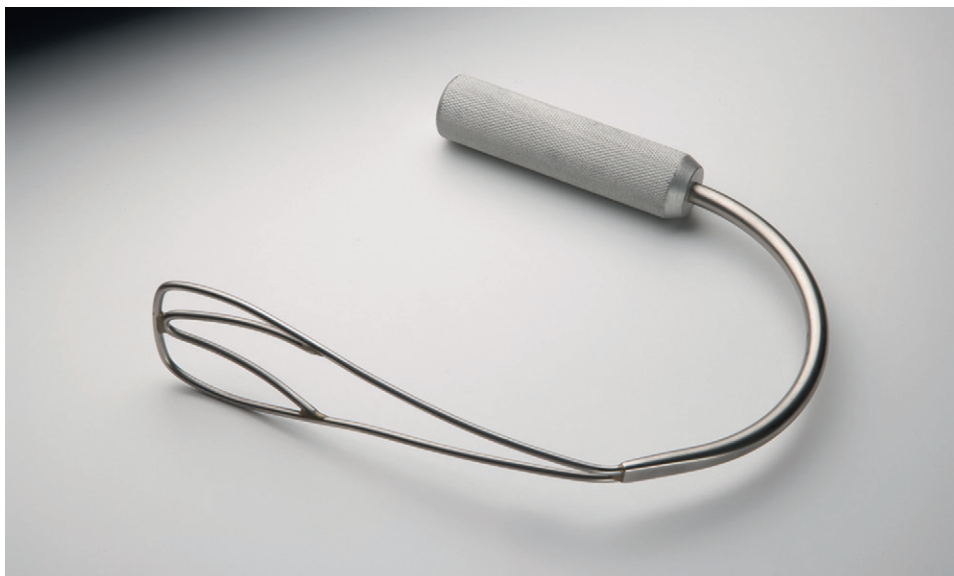


Instrument: JARIT CROSS ACTION RETRACTOR

Other Names: Holzheimer retractor, Cricket retractor, finger retractor, Heiss retractor

Use(s): Used for retracting a small, shallow wound edge.

Description: Self-retaining retractor with four outward-curved claws.

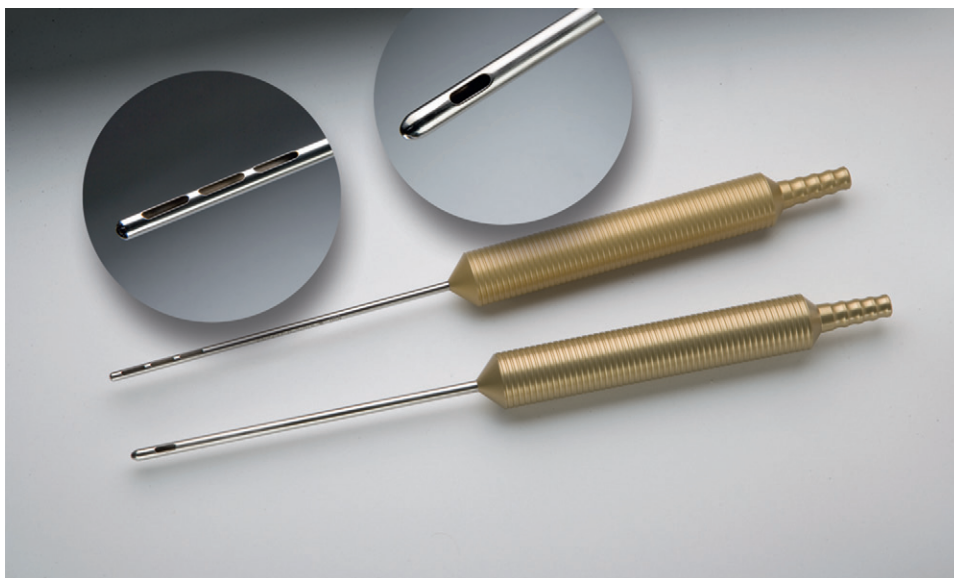


Instrument: BRIGGS MAMMOPLASTY RETRACTOR

Use(s): Used for retracting breast tissues during a mammoplasty.

Description: A large, curved retractor with a teardrop-shaped wire blade and a round grip handle.

SUCTIONING AND ASPIRATING INSTRUMENTS



Instrument: LIPOSUCTION CANNULA

Use(s): Used for aspirating adipose tissue during a liposuction procedure.

Description: Rigid suction cannulas with various lengths, sizes, and tips.

Instrument Insight: The cannulas attach to firm, large-bore suction tubing, which is then attached to a high-pressure suction unit.

SUTURING AND STAPLING INSTRUMENTS

Instrument: WEBSTER NEEDLE HOLDER

Use(s): Used for holding small suture needles during delicate procedures.

Description: A small, fine needle holder with carbide cross-hatch pattern serrations on the inner jaws.



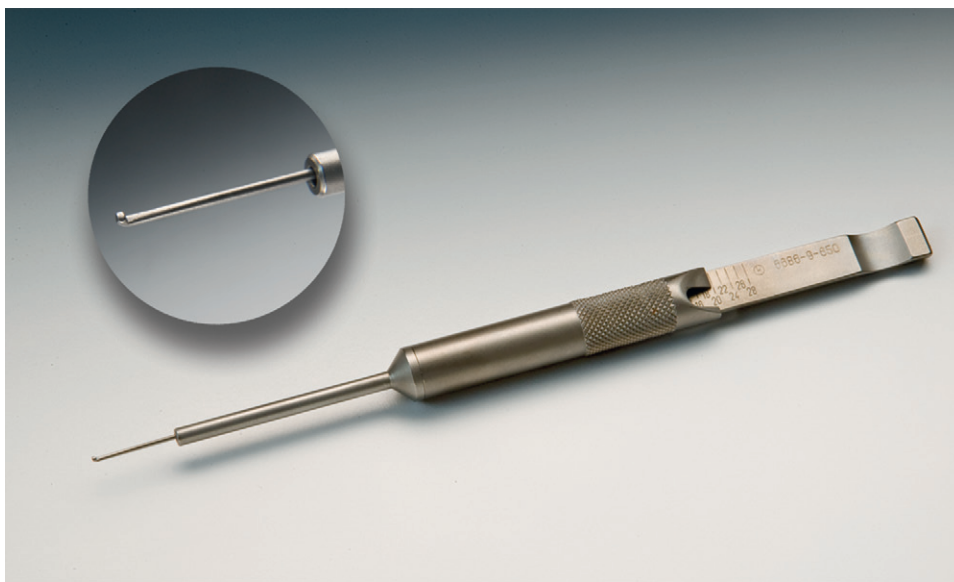
Instrument: HALSEY NEEDLE HOLDER

Use(s): Used for holding small suture needles during delicate procedures.

Description: A small, fine needle holder with carbide cross-hatch pattern serrations on the inner jaws.

Orthopedic Instruments

ACCESSORY INSTRUMENTS

**Instrument:** DEPTH GAUGE

Other Names: Screw depth gauge

Use(s): Used for confirmation of the depth of the drill hole in bone to determine the length of the screw.

Description: A thin, stainless steel probe with a right-angle hook on the distal end and with a solid, flattened measuring device that is calibrated in millimeters on the proximal end. A sliding metal sleeve encircles the probe and measuring device.

Instrument Insight: Always have the depth gauge available when placing bone screws. To measure the depth of a hole, the surgeon pushes the sleeve against the proximal side of the hole and extends the probe into and beyond the distal side of the hole; the surgeon then retracts the probe, finding the distal side of the hole with the hook. The surgeon reads the measurement of depth by examining the position of the proximal sleeve along the graduated scale.



Instrument: **RULER**

Other Names: Measuring stick

Use(s): Used for measuring structure and distances.

Description: A stainless steel ruler that is calibrated in millimeters and inches.

Instrument Insight: Rulers may also be made of plastic.



Instrument: **MALLET**

Other Names: Hammer

Use(s): Used to impact and extract implants or exert force on osteotomes, chisels, gouges, tamps, and other specially designed instruments.

Description: A solid stainless steel hammer-like instrument or may also be brass-filled stainless steel. Weight is usually 1 to 3 pounds. Mallets are used in other specialties that involve bone work.

Instrument Insight: Make available after passing any osteotomes, chisel, tamp, etc.



Instrument: BONE TAMP

Other Names: Tamp

Use(s): Used to compact or wedge a structure into place (e.g., a bone wedge).

Description: Solid stainless steel dowel with a grip handle and round, flattened working end.

Instrument Insight: Hand to surgeon with a mallet.



Instrument: TOWNLEY CALIPER

Other Names: Caliper

Use(s): Used for measuring structures and distances. Commonly used for measuring the

thickness of patella before cutting its undersurface during a total knee arthroplasty.

Description: A slide ruler that measures in millimeters and inches between the tips.

**Instrument: BONE CEMENT GUN****Other Names:** Cement gun**Use(s):** Used for injecting polymethyl methacrylate (PMMA) bone cement during total joint procedures.**Description:** The proximal end has a plunger-type disk that moves forward when the handles are compressed. This forces the glue through the chamber and out the tip, similar to a caulk gun.**Instrument Insight:** Setting time for PMMA is approximately 8 to 16 minutes after the prosthesis is positioned. The surgeon will need to know how the glue is setting; be sure to obtain a small amount of glue to test for heat and hardening and record the time when the glue was placed in the gun.**Instrument: BONE CEMENT SYSTEM****Use(s):** Used for mixing the liquid (monomer) and powder (polymer) to produce bone cement, also known as polymethyl methacrylate (PMMA).**Instrument Insight:** The manufacturer recommends double gloving when mixing

cement. Nonlatex gloves are not recommended because the liquid monomer can be absorbed through gloves.

⚠ CAUTION: The liquid monomer is highly flammable; the ESU should never be used near the liquid or the uncured cement.

**Instrument: FIBEROPTIC LIGHT CORD**

Other Names: Light cord

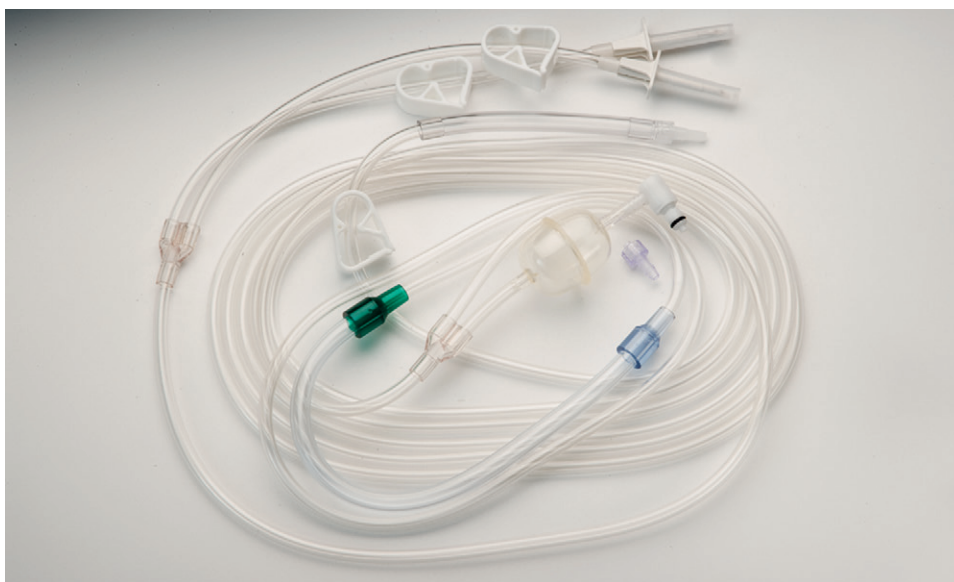
Use(s): Used for delivering high-intensity light to the endoscope for illumination during endoscopic procedures.

Description: A 10-foot-long fiberoptic cable with an endoscope adaptor at the proximal end and a light source adaptor at the distal end.

Instrument Insight: Exercise care when handling a fiberoptic cord; it should never be placed under

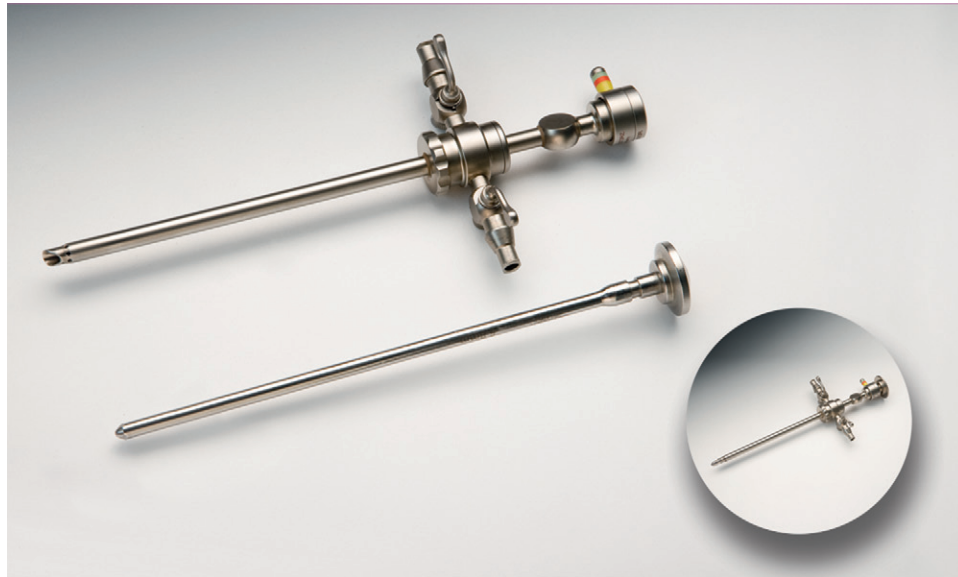
a heavy object, dropped, twisted, or kinked because the tiny fibers inside can be easily damaged.

CAUTION: When not in use, the light source must be placed on standby or turned off. The intense heat from the beam can cause the patient's drapes or any flammable vapors around the patient to ignite.

**Instrument: PUMP TUBING**

Use(s): Attaches irrigation fluid bags to pump at one end with the other end attached to the arthroscopic irrigation cannula.

Description: Hollow tubing with bifurcated spike ports and tubing clamps on one end, and the pump attachment mechanism and a Luer-Lok attachment at the other end.



Instrument: 4-MM SHEATH WITH BLUNT OBTURATOR

Use(s): Creates a port in which the endoscope is introduced and exchanged through the sheath or cannula.

Description: A hollow, stainless steel sheath with a blunt tip obturator that fits inside.

Instrument Insight: The blunt tip is less traumatic on the tissues. Tip can be various sizes, depending on the size of the joint.



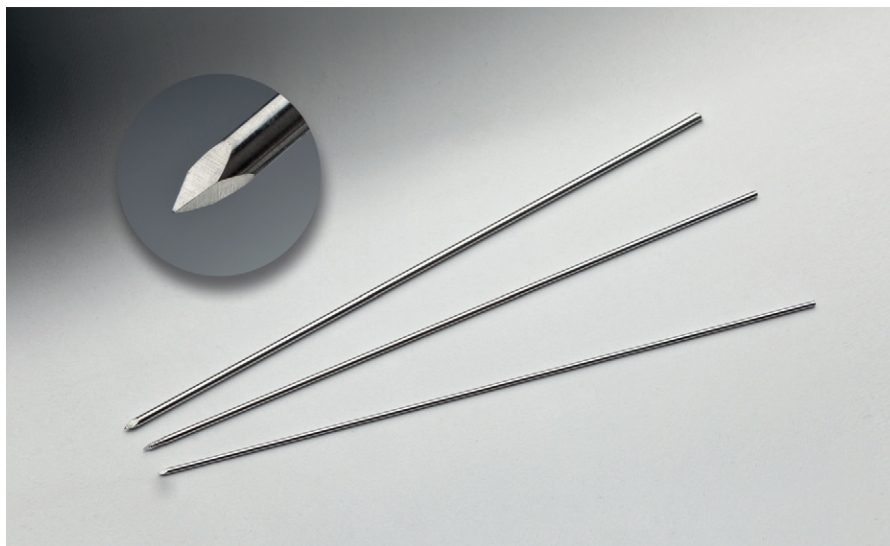
Instrument: 4-MM SHEATH AND SHARP OBTURATOR

Use(s): Creates a port in which the endoscope is introduced and exchanged through the sheath or cannula.

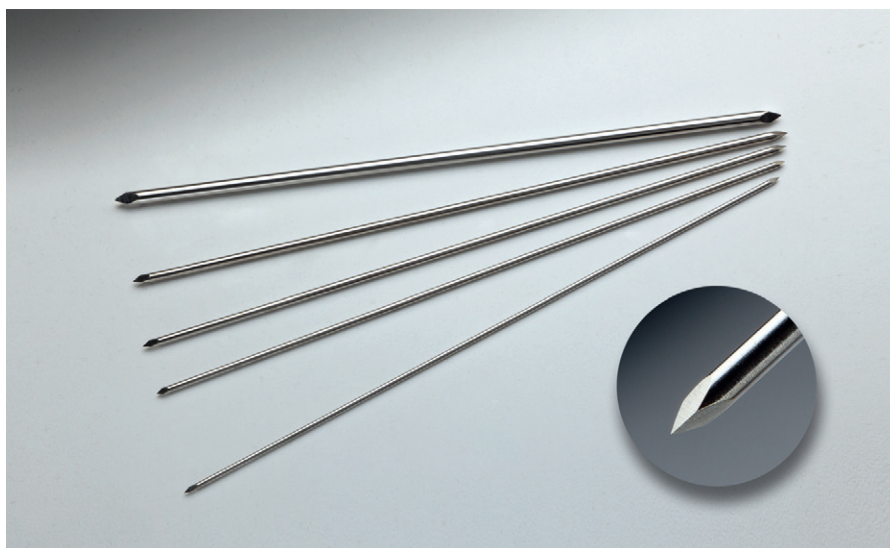
Description: This is a hollow, stainless steel sheath with a sharp tip obturator that fits inside.

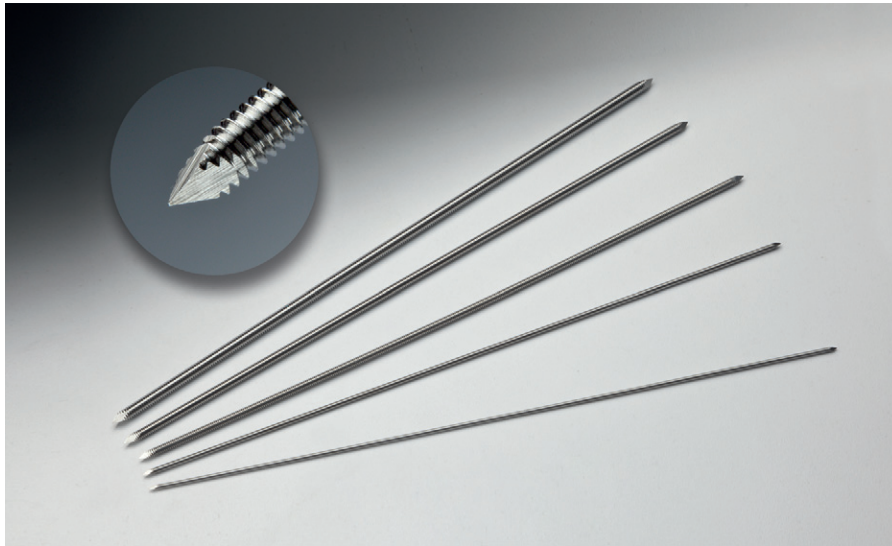
Tips are available in various sizes, depending on the size of the joint.

Instrument Insight: The sharp tip is used to pass through tough tissue.

**Instrument: KIRSCHNER WIRES****Other Names:** K wires, metacarpal pins**Use(s):** A steel wire used skeletal fixation of bone fractures and for placing skeletal traction for bone fractures. These are often used on small bones such as phalanges, wrist, and ankle and are often placed percutaneously.**Description:** Stainless steel wires are smooth or threaded with trocar and diamond points on one

end or on both ends. K wires are available in sizes from 0.7 through 1.6 mm (0.028 through 0.062 inch).

Instrument Insight: Care should be taken when handling because these have very sharp points that can easily puncture skin.**Instrument: SMOOTH STEINMAN PINS****Other Names:** Smooth pins**Use(s):** These pins can be used for fixation of bone fractures, bone reconstruction, and as a guide pin when placing implants and placing skeletal traction. Often used on larger bones.**Description:** Smooth stainless steel pin with a trocar or diamond point. Steinmann pins are available in sizes from 2.0 through 4.8 mm (5/64 through 3/16 inch).**Instrument Insight:** Care should be taken when handling; these have very sharp points that can easily puncture skin.

**Instrument: THREADED STEINMAN PINS**

Other Names: Threaded pins

Use(s): These pins can be used for fixation of bone fractures, bone reconstruction, and as a guide pin when placing implants and placing skeletal traction. Often used on larger bones.

Description: Threaded stainless steel pins with a trocar or diamond point. Steinmann pins are

available in sizes from 2.0 through 4.8 mm (5/64 through 3/16 inch).

Instrument Insight: Care should be taken when handling; these have very sharp points that can easily puncture skin.

**Instrument: CHUCK AND KEY**

Other Names: Drill chuck

Use(s): Most commonly used to hold rotating devices, such as the drill bit or a pin in a power tool. Some chucks can also hold irregularly shaped objects and those that lack radial symmetry. Often the jaws will be tightened

or loosened with the help of a chuck key, which is a wrench-like device made to tighten or loosen the jaws.

Description: A chuck is a specialized type of clamp in which the jaws, which are arranged in a radially symmetrical pattern like the points of a star, are used to hold a cylindrical object.

**Instrument: UNIVERSAL SCREWDRIVER SET****Other Names:** Screwdriver kit**Use(s):** Used during revision of total joint surgery in which screws were used, removal of bone plates, fracture fixation screws, or bone graft screws.**Description:** Set consists of a handle that accommodates any of the four double-ended

screwdriver bits and one each of small and large single slot, cross and cruciate, 3.5-mm and 4.5-mm hex, and small and large Phillips heads.

Instrument Insight: The set helps eliminate the opening of multiple sterile packs when a specific size or style of screwdriver is needed.**Instrument: PLATE BENDING PLIERS****Other Names:** Plate bender**Use(s):** Used during open reduction internal fixation (ORIF) to bend the plate to conform to the contour of the bone in which it is being implanted.**Description:** Pictured are large forceps. The plate is slid into the jaws and compressed to

bend the plate. These come in various sizes and designs depending on the type of plating system that is being used and the size and type of bone that is being fixated.

Instrument Insight: Often plate benders will be found in the fixation set that you are using.

**Instrument: LEAD HAND**

Use(s): Often used during hand procedures to position the hand open for exposure.

Description: A hand-shaped malleable metal device with tabs.

Instrument Insight: The patient's hand is generally laid onto the lead hand palm up. The metal fingers

are bent up over the top of the patient's fingers to hold them down, then the tabs are molded around the wrist, index finger, and little finger to secure the hand open.

CUTTING AND DISSECTING INSTRUMENTS

**Instrument: GIGLI SAW**

Use(s): A type of hand saw used for cutting bone. A back and forth movement of the "T" handle slides the cable over the bone, creating a notch that continues through the bone. Often used for amputations and can be used to open the skull for craniotomies.

Description: A flexible, twisted wire cable with looped ends that affix to the hooks on the two "T" handles. The handles may also be oval or box shaped. The wire cable may be replaced after each use or when it becomes dull.

CAUTION: Do not run fingers and/or hand along the blade; this could tear gloves and skin.



Instrument: STRYKER SYSTEM 6 POWER

Use(s): Used for cutting, reaming, or drilling large bones.

Description: All-in-one battery-powered system that consists of an oscillating saw, reciprocating saw, sternal saw, and a rotary handpiece. The rotary handpiece is used for reaming or drilling

and has a variety of attachments and chucks that are used for a specific purpose.

Instrument Insight: Check batteries for a full charge and the appropriate saw blade for the procedure. Check the surgeon's preference card for the appropriate saw blades. Power instruments should NEVER be submerged in water.



Instrument: STRYKER CORE SYSTEM

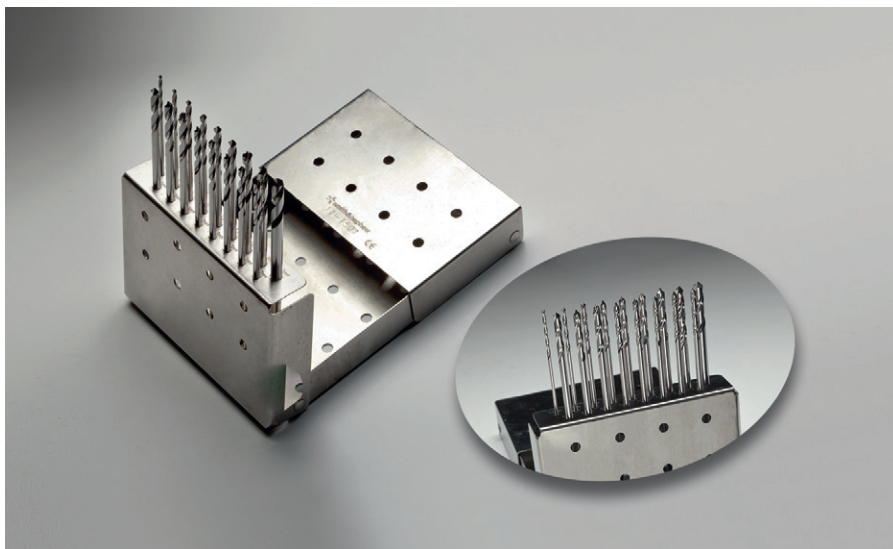
Other Names: TPS system

Use(s): Used for cutting, drilling, or burring small bones.

Description: An all-in-one electrical-powered system that consists of sagittal, oscillating, and reciprocating saws, microdrill, and universal driver handpiece. The universal drivers are

capable of pin and wire driving, sawing, drilling, tunneling, or reaming and have a variety of attachments, collets, and chucks that are used for a specific purpose.

Instrument Insight: Refer to the surgeon's preference card for type of blades or burrs used. Power instruments should NEVER be submerged in water.



Instrument: DRILL BIT SET

Other Names: Drill box

Use(s): Drill bits are used to drill holes in bone, usually before the placement of a screw.

Description: The drill bits in this case range from 1.6 mm to 4.7 mm.

**Instrument:** LITTLER SCISSORS

Use(s): Used for fine tissue dissection.

Description: Slightly curved, blunt-tip, sharp blades. The holes on the blades serve to draw suture or muscle through a tunnel dissection.

Instrument Insight: Use caution when passing because of sharp edges; only use on tissue—never use to cut drapes or suture.

**Instrument:** UTILITY SCISSORS

Other Names: Bandage scissors

Use(s): Cut bandages, casting material, clothing, and other nonsterile items.

Description: Serrated edge with blunt tip on lower jaw to prevent cutting tissue or skin.

Instrument Insight: Used to cut dressing, drapes, cast material, etc. These scissors should never be used to cut tissues or suture.



Instrument: BONE FILE

Other Names: Rasp

Use(s): Used for smoothing rough edges or surfaces of large bones.

Description: A single-handle instrument with flat end with serrations in a crisscross pattern.

Instrument Insight: This should always be available during total joint procedures to smooth bone surfaces.



Instrument: MILLER RASP

Other Names: Small rasp

Use(s): Used for smoothing rough edges or surfaces of small bones.

Description: A double-ended instrument with tear-shaped ends. One end has fairly thick ridges

in parallel lines; the ridges on the other end are closer together.

Instrument Insight: Instrument is used to smooth bone surfaces in small areas or when the areas are hard to reach.

**Instrument: PUTTI BONE RASP**

Other Names: Putti Platte, rat tail

Use(s): Used for smoothing rough edges or surfaces of large bones.

Description: A flattened, double-ended rasp with a rounded blade on one end and a half-rounded blade on the other end. The blade surfaces are covered with tiny spikes.

Instrument Insight: Immerse and gently stir the rasp in water to keep instrument surface clean between uses.

CAUTION: Do not run fingers and/or hand along the blade; this could tear gloves and skin.

**Instrument: KEY ELEVATOR**

Use(s): Dissects or separates hard tissue (e.g., periosteum from bone).

Description: A solid, smooth, octagonal handle with a squared, flat, and sharp working end that comes in a variety of sizes.

Instrument Insight: Inspect edge before and after each use for nicks to ensure sharpness.

**Instrument: CREGO ELEVATOR**

Use(s): Dissects or separates tissue; retracts tissue.

Description: Thick handle with long, thin, curved, flat edge.

Instrument Insight: Inspect edge for nicks to ensure sharpness.

**Instrument: FREER ELEVATOR**

Use(s): Lifts the periosteum from bone or retracts in confined spaces.

Description: Round handle with flattened, tear-shape tips at both ends; one end is sharper than the other.

Instrument Insight: Small balls of bone wax are pressed onto the tip and then are smeared in bone edges for hemostasis.

**Instrument: LISTON BONE CUTTING FORCEPS**

Other Names: Large bone cutters

Use(s): Used for cutting large bones.

Description: Large double-action forceps with curved or straight blades that are rounded to the tip with sharp inner jaw edges.

Instrument Insight: The double action gives the forceps more torque at the tip for better cutting action.

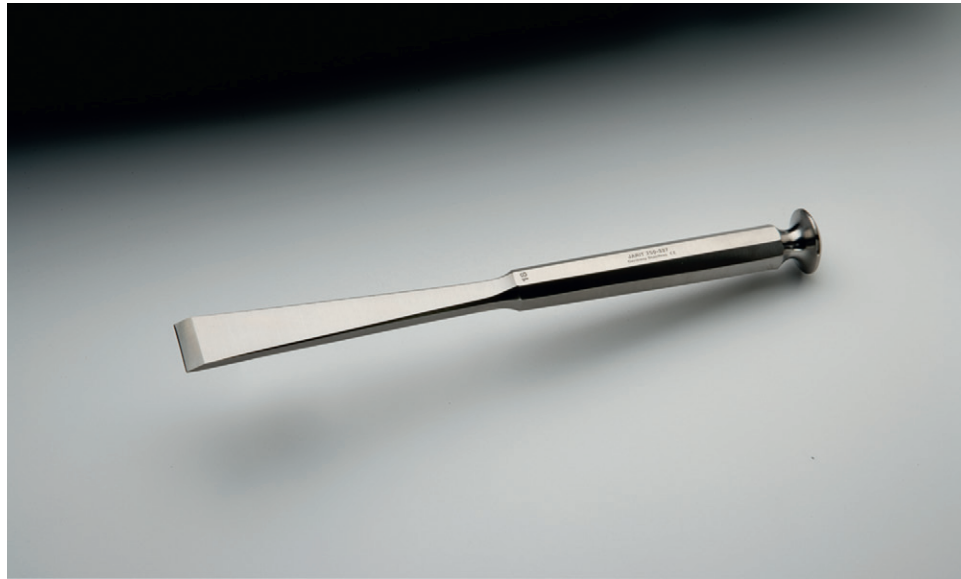
**Instrument: STILLE BONE GOUGE**

Use(s): Used to cut or scoop out a channel of bone.

Description: A flat, round impaction platform with a solid octagonal handle that extends to a trough-like blade that has a sharp cutting edge.

Gouges are available in cases or in sets with a variety of sizes.

Instrument Insight: Always hand the gouge to the surgeon with a mallet. Inspect edges for breaks or nicks to ensure precision, sharpness, and patient safety.

**Instrument: STILLLE BONE CHISEL**

Use(s): Used to cut or shape bone. The chisel is often used when harvesting a bone graft.

Description: A flat, round impaction platform with a solid octagonal handle that extends to a flattened, flared blade with a beveled edge. Chisels are available in cases or in sets with a variety of sizes.

Instrument Insight: Always hand the chisel to the surgeon with a mallet. Inspect edges for breaks or nicks to ensure precision, sharpness, and patient safety.

**Instrument: STILLLE BONE OSTEOTOME**

Use(s): Used to cut or shape bone. The osteotome is often used when harvesting a bone graft.

Description: A flat, round impaction platform with a solid octagonal handle that extends to a

flattened, flared blade. Osteotomes are available in cases or in sets with a variety of sizes.

Instrument Insight: Always hand the osteotome to the surgeon with a mallet. Inspect edges for breaks or nicks to ensure precision, sharpness, and patient safety.



Instrument: LAMBOTTE OSTEOTOME

Use(s): Used to cut or shape bone. An osteotome is often used when harvesting a bone graft.

Description: A flattened, stainless steel ribbon that tapers to a sharp cutting edge; osteotomes are available in various size widths.

Instrument Insight: Osteotomes may come in cases or sets with a variety of sizes and may be straight or curved. Inspect edges for breaks or nicks to ensure precision, sharpness, and patient safety.



Instrument: CANNULATED PIN CUTTER

Other Names: Pin cutter

Use(s): Used for cutting wire or small pins, such as Kirschner wires (K wires) or Steinmann pins.

Description: Heavy, curved handles with extremely curved jaws that meet flush against one another and have extremely sharp edges. There is a

circular pin channel between the jaws that runs through the lock box and between the handles. The channel allows the pin to slide through the jaws so the proper length can be cut.

Instrument Insight: Inspect jaw edges for breaks or nicks to ensure precision and sharpness.



Instrument: DIAMOND PIN CUTTER

Other Names: Pin cutter

Use(s): Used for cutting wire or small pins, such as Kirschner wires (K wires) or Steinmann pins.

Description: Heavy, curved handles with a guillotine-action tip. The working end has an

angled channel that allows the pin to be placed into the jaw so the proper length can be cut.

Instrument Insight: Double-action jaws allow for more power when cutting. Inspect for sharpness and smooth action of jaw and cutting surfaces.



Instrument: LARGE PIN CUTTER

Other Names: Bolt cutter, rod cutter

Use(s): Used for cutting heavy pins and rods.

Description: Very long handles with double-action hinges and a sharp, small cutting surface.

Instrument Insight: A long handle with double action allows a great amount of force to be applied to the jaws.

CAUTION: When setting up, always check the screw to ensure it is tightened down and can not fall out into the wound when in use.



Instrument: BRUNS OVAL BONE CURETTES

Other Names: Curettes

Use(s): Used for scooping out tissue or material from small, tight areas.

Description: Thick handles with a small scoop at one end; scoops have a variety of shapes and angles.



Instrument: STILLE-LUER RONGEUR

Other Names: Straight rongeur, large mouth rongeur

Use(s): Used to grasp, bite, and detach large amounts of tissue.

Description: Large-handled double-action mechanism with large, oval cup shape jaws.

Instrument Insight: Frequently used instrument for large cases that require significant dissection or cleaning of the area.

⚠ CAUTION: When setting up, always check the screw to ensure it is tightened down and can not fall out into the wound when in use.

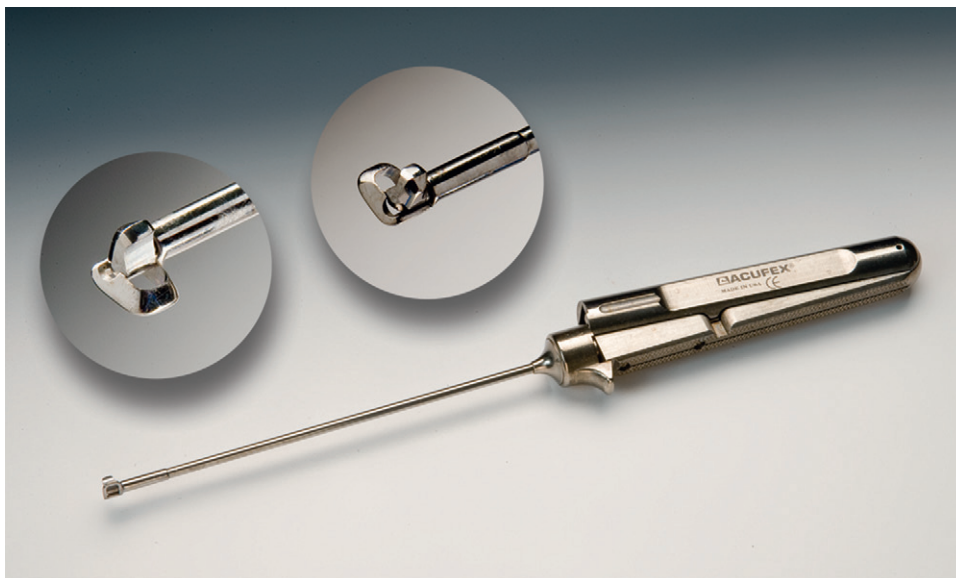
**Instrument:** ZAUFEL-JANSEN RONGEUR**Other Names:** Small-mouthed rongeur**Use(s):** Used for removing pieces of bone and the soft tissue surrounding the bone.**Description:** Large handle with double-action mechanism and thin, sharp jaws.**Instrument Insight:** The double-action mechanism gives the rongeur more torque at the tip for better biting action. Always have a moistened sponge ready when handing the surgeon a rongeur. As the surgeon works to remove tissue

and/or bone, the rongeur has to be cleaned between uses. While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will clean the tissue from the jaws.

CAUTION: When setting up, always check the screw to ensure it is tightened down and can not fall out into the wound when in use.

**Instrument:** CUSHING RONGEUR**Use(s):** Used for removing pieces of bone and the soft tissue surrounding the bone.**Description:** Medium-sized handle with a single hinge and short, oval, cup-shaped jaws.**Instrument Insight:** Always have a moistened sponge ready when handing the surgeon a

rongeur. As the surgeon works to remove tissue and/or bone, the rongeur has to be cleaned between uses. While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will clean the tissue from the jaws.



Instrument: DUCKBILL RIGHT AND LEFT BITER

Use(s): Cuts and dissects tissue during arthroscopy procedures.

Description: A thick handle with thumb lever that opens and closes the jaws. Has a

square-shaped cutting tool on the right or left side of the instrument.

Instrument Insight: Before handing to the surgeon, hold this instrument by the handle with the cutting end away from you so that you may visualize what side the cutter is facing.



Instrument: DUCKBILL STRAIGHT BITER

Use(s): Cuts and dissects tissue facing the surgeon.

Description: Ringed handles with a thin rod that has a rectangular-shaped cutter attached distally.

**Instrument: SHAVER**

Use(s): Houses various shaver attachments to remove, trim, or burr tissue and bone.

Description: Motorized handpiece (pictured in blue) is an attachment for various burs and blades that move at various speeds and directions. Suction tubing is connected to the adaptor next to the cord attachment. The black cord end is handed off the field and connected to the

control panel. The shaver is activated by stepping on the foot pedal or with buttons on the handpiece.

Instrument Insight: Shaver often gets clogged with debris. Remove shaver attachment, separate it into its two parts, and remove tissue. HINT: Strike the two parts together to remove tissue.

GRASPING AND HOLDING INSTRUMENTS

**Instrument: MARTIN CARTILAGE CLAMP**

Other Names: Meniscus clamp

Use(s): Used for grasping heavy tissues and cartilage. The Martin is often used to grasp the

meniscus for dissection during total knee arthroplasty.

Description: Ringed handles with large serrations placed in opposition.

**Instrument: PLATE FORCEPS**

Other Names: Plate holding forceps, plate holders, plate clamp

Use(s): During an open reduction internal fixation, these are used to hold the plate in alignment while drilling and screw placement takes place.

Description: These come in various sizes and designs depending on the type of plating

system that is being used and the size and type of bone that is being fixated. The foot of the forceps fits into the counter of the plate, ensuring a firm grip of the plate and the back side of the bone. The foot often has the ability to swivel for precise positioning of the forceps onto the plate.

**Instrument: KERN BONE-HOLDING FORCEPS**

Use(s): Used for manipulating bone fractures into place and for holding the fracture in alignment while plates and screws are placed. Also used during total joint procedures to grasp bone segments.

Description: Long, thin handles with a bar ratchet device between them to lock jaws in

place. The inner jaws have four heavy teeth and heavy serrations that allow for secure grasping of the bone.

Instrument Insight: Hands and instruments should be kept away from the ratchet bar during the procedure to prevent inadvertently releasing it.

**Instrument:** LOWMAN BONE CLAMP

Use(s): Used for holding the fractured bone in alignment while plates and screws are placed.

Description: Three curved, grasping, blunt claws at the working end that are tightened

into position by turning the screw mechanism at the proximal end.

Instrument Insight: Inspect the screw mechanism before surgery to ensure that it is working properly.

**Instrument:** LEWIN BONE-HOLDING FORCEPS

Other Names: Joplin

Use(s): Used for manipulating bone fractures into place and to holding the fracture in alignment while plates and screws are placed. The Lewin can also be used during a hip arthroplasty to

punch holes in bone for passage of sutures when closing the joint.

Description: Ringed handles with very sharp double-curved graspers.

Instrument Insight: Because of sharp ends, use extreme caution when handling.



Instrument: NEEDLENOSE PLIERS

Use(s): Remove pins and hardware and twist wires.

Description: Thin, single-action handles with serrated jaws that narrow to a point.



Instrument: PLIERS

Other Names: Channel locks

Use(s): Used to place or remove hardware and to grasp pointed trocar during drain insertion of deep wounds.

Description: Thin, single-action handles with thin and thick serrations and rounded-end jaws. Hinge provides two opening sizes of the jaws.

RETRACTING AND EXPOSING INSTRUMENTS**Instrument: BENNETT RETRACTOR**

Use(s): Used for retracting tissues during procedures involving large bones (e.g., the proximal or mid-shaft of the femur).

Description: A smooth, solid grip type handle with a downward-curved, rounded, flared blade and a smaller upward-curved round lip.

Instrument Insight: The lip of the Bennett is slid behind and around the bone shaft for leverage when retracting tissues. There is no pulling needed when holding this retractor; once it is placed, simply hold the handle down or back.

**Instrument: HIBBS RETRACTOR**

Use(s): This is a tissue retractor for either deep or superficial areas. The Hibbs is often used in large bone cases.

Description: This is a flattened, double-ended retractor that has a laterally bent blade and slightly bent lip with V-shaped teeth on one end and a small, crescent-shaped blade on the other.

**Instrument: BECKMAN RETRACTOR**

Use(s): Used for retraction in procedures involving deep tissue, such as the spine, and in proximal femur fractures.

Description: Self-retaining, finger-ringed instrument with a ratcheted/release device on the shanks. Two hinged arms extend from the shank to three outward-curved prongs on one side and four on the other. These prongs can be sharp or dull.

Instrument Insight: Always hand this retractor to the surgeon with the prongs pointing downward.

CAUTION: The prongs may be very sharp. Exercise care when handling sharp instruments to avoid puncture to gloves and/or skin.

**Instrument: MURPHY-LANE BONE SKID**

Use(s): Used for removing the femoral head from the joint during total hip arthroplasty.

Description: Double ended with large or small curved spoons at each end.

Instrument Insight: The size of the femoral head and the acetabulum will determine which end of the bone skid to use.

**Instrument:** BONE HOOK

Use(s): Used for retracting bone or heavy tissue.

Description: Thick handle with an extremely sharp curved hook at the working end.

Instrument Insight: Always hand the bone hook to the surgeon with the prongs pointing downward.

⚠ CAUTION: The prongs are very sharp. Exercise care when handling sharp instruments to avoid puncture to gloves and/or skin.

**Instrument:** CHANDLER RETRACTOR

Other Names: Chandler elevator

Use(s): Used for retracting bone and tissue.

Description: Thick handle with medium-curved, blunt blade.

Instrument Insight: This instrument is used to hold soft tissue away from bone, like a lever, when the surgeon is performing fixation.

**Instrument: MINI HOHMANN RETRACTOR**

Use(s): Used for retracting tissue or bone in tight, small areas. The mini Hohmann is often used during open reduction internal fixation (ORIF) of the ankle.

Description: A flattened, smooth handle with thin, slightly curved blades and with a small, upward-curved, pointed tip.

Instrument Insight: The tip of the Hohmann is slid behind and around the bone for leverage when retracting tissues. There is no pulling needed when holding this retractor; after it is placed, simply hold the handle down or back.

**Instrument: SHARP HOHMANN RETRACTOR**

Use(s): Used for retracting a large area of tissue, usually close to bone.

Description: Flat handle with two holes placed distally to aid in grasping the handle. The blade is shaped in a square with an upward, slightly curved prong at the end.

Instrument Insight: The prong of the Hohmann is slid behind and around the bone for leverage when retracting tissues. There is no pulling needed when holding this retractor; after it is placed, simply hold the handle down or back.



Instrument: BLUNT HOHMANN RETRACTOR

Use(s): Used for retracting a small amount of tissue in a very tight area.

Description: Flat handle with two holes placed distally. The blade is blunt, very thin, and slightly

curved. There is no pulling needed when holding this retractor; after it is placed, simply hold the handle down or back.



Instrument: RAGNELL RETRACTOR

Use(s): Used for retracting varying amounts of tissue at different depths.

Description: Double ended with right-angle, blunt blades that are available in different sizes.

**Instrument: ISRAEL RAKE RETRACTOR**

Use(s): Used for retracting large amounts of tissue that usually does not involve bone.

Description: The handle has a teardrop opening with two prongs on each side. Has four large claws that may be blunt or sharp.

Instrument Insight: This instrument is also available with sharp prongs.

**Instrument: COBRA RETRACTOR**

Use(s): Used for retraction of large areas of tissue. The large bend in the blade allows tissue to be retracted far away from the field, allowing for better visualization.

Description: This is a smooth, solid grip type handle with a downward-curved, flared blade and with a smaller upward-curved, round tip.

Instrument Insight: There is no pulling needed when holding this retractor; after it is placed, simply hold the handle down or back.

**Instrument:** BLOUNT KNEE RETRACTOR

Use(s): Used for retracting tissue at a right angle.

Description: Thin, flat handle with a blunt blade at a right angle and slightly curved.

Instrument Insight: Often used as a lever to retract. There is no pulling needed when holding this retractor; after it is placed, simply hold the handle down or back.

**Instrument:** TAYLOR HIP RETRACTOR

Use(s): Used for retracting tissue for exposure in total hip arthroplasties.

Description: Thin handle with curved, rounded end and blade at a right angle with a sharp tip.

Instrument Insight: The sharp tip is placed next to or on the bone for leverage. There is no pulling needed when holding this retractor; after it is placed, simply hold the handle down or back.



Instrument: ALM RETRACTOR

Use(s): Used for retracting in small areas.

Description: A self-retaining retractor. Thumb screw with flaring wings to open the arms of the retractor. Four sharp prongs on each side.



Instrument: HUMERAL HEAD RETRACTOR

Use(s): Placed between the glenoid and the humeral head to obtain exposure.

Description: An angled two-prong blade with a straight flat handle.



Instrument: FUKUDA HUMERAL HEAD RETRACTOR

Other Names: Humeral head, Fukuda

Use(s): Used to retract the humeral shaft posteriorly and helping to expose the entire glenoid surface.

Description: The Fukuda is available in small and large sizes; it has a T-bar style handle with an angled blade with an oval fenestration at the working end.



Instrument: LEVER SKID HUMERAL HEAD RETRACTOR

Other Names: Bone skid, shoulder skid

Use(s): Removal of the humeral head from the joint during a total shoulder arthroplasty.

Description: Double ended with large and small curved spoons at each end.

**Instrument: CAPSULE RETRACTOR**

Other Names: Fork

Use(s): The two- and three-prong retractors are designed to be placed medially along the scapular neck to retract the anterior capsule and labrum. The single prong retractor is commonly

used when retracting on the inferior rim of the glenoid.

Description: A curved ribbon of steel with three angled sharp prongs at the working end. These come with one, two, or three prongs, which are design to retract in different areas.

**Instrument: BROWNE DELTOID RETRACTOR**

Use(s): Placed to contour the humeral head for deltoïd retraction to allow for exposure.

Description: The blade is concave and angled with a cup-like indentation at the working end. The handle is flat with a round opening with two curved prongs to each side at the distal end.



Instrument: KOLBEL SELF-RETAINING
GLENOID RETRACTOR

Use(s): For retracting the capsule open during shoulder procedures.

Description: A finger-ring ratcheted self-retaining retractor that has exchangeable shallow to deep blades.

SUCTIONING AND ASPIRATING INSTRUMENTS



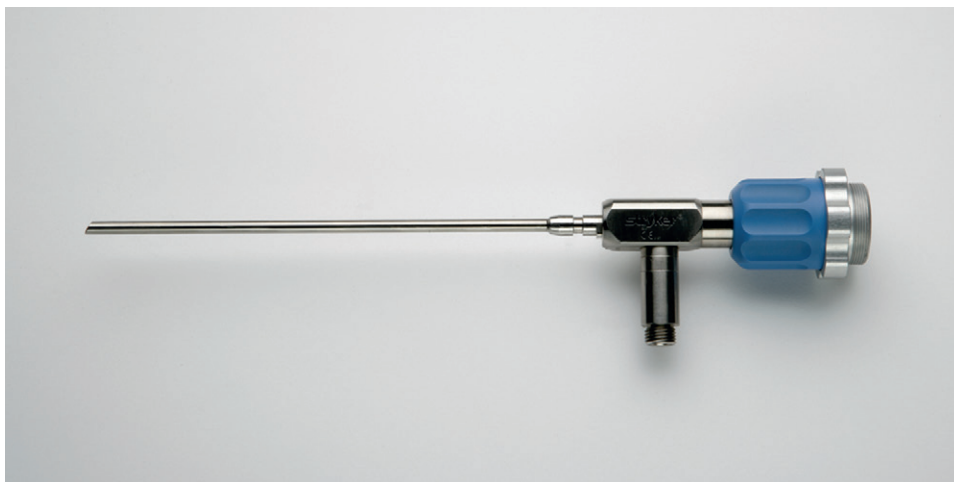
Instrument: PULSAVAC

Other Names: Pulse lavage

Use(s): Used for irrigation and debridement of tissues. The Pulsavac is commonly used for high-pressure irrigation during total joint arthroplasties.

Description: A battery pack provides power. The irrigation spike and the suction connection are handed off the sterile field. Pulsavac gun has two speeds with controls on the handle. A barrel is attached to the gun with a funnel at the distal end of the gun.

VIEWING INSTRUMENTS



Instrument: 25° 4-MM LENS

Other Names: Arthroscope

Use(s): Used for viewing the inside of a joint.

Description: A rigid, stainless steel tube containing an optical chain of precisely aligned glass lenses and spacers. The objective lens is located at the distal tip of the scope. This determines the viewing angle. The stainless steel cylinder is called the optical element or the telescope, providing both images and light. The light connector allows

attachment of the light cord to the telescope.

At the proximal end is the eyepiece or ocular lens; this attaches to the camera coupler, or the surgeon may view the surgical field directly.

Instrument Insight: 25° is the angle in which the objective lens views. 25° endoscopes are very expensive and fragile. Care should be exercised when handling an endoscope; it should never be picked up by the distal telescope end, placed under heavy objects, or dropped.



Instrument: ENDOSCOPIC CAMERA

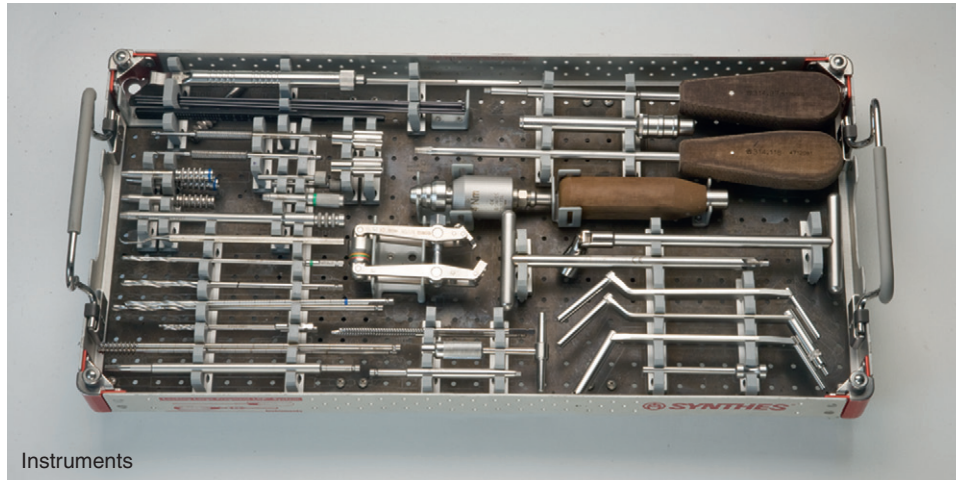
Use(s): Used for the transmission of images from the rigid or flexible endoscope to the video monitor.

Description: At the distal end of the camera is the coupler, which attaches the camera to the eyepiece of the rigid scope. The coupler is attached to the camera head, which provides the image quality. Attached to the camera head is

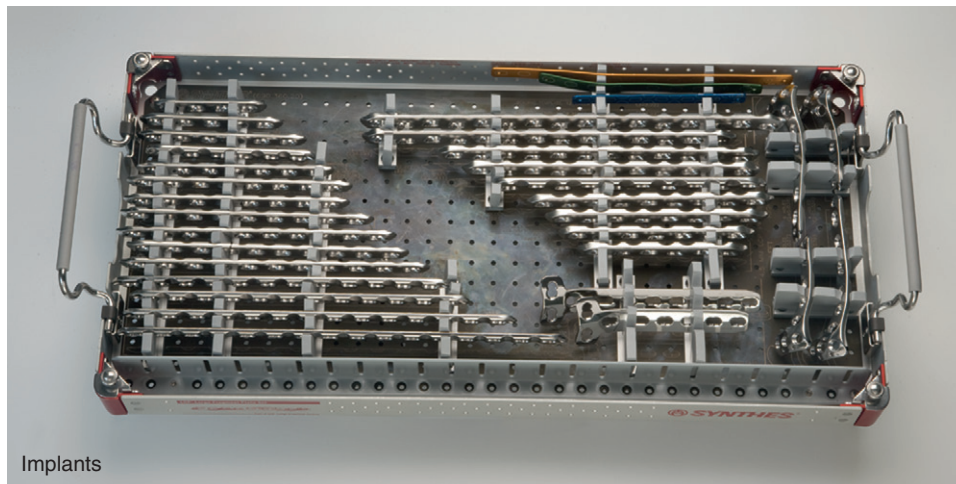
the cord, which relays the images back to the video system.

Instrument Insight: Most camera failures are related to a damaged cord. Care should be exercised when handling the camera and cord. They should never be placed under a heavy object, dropped, twisted, or kinked. Also keep the distal end covered until it is ready to be plugged into the unit.

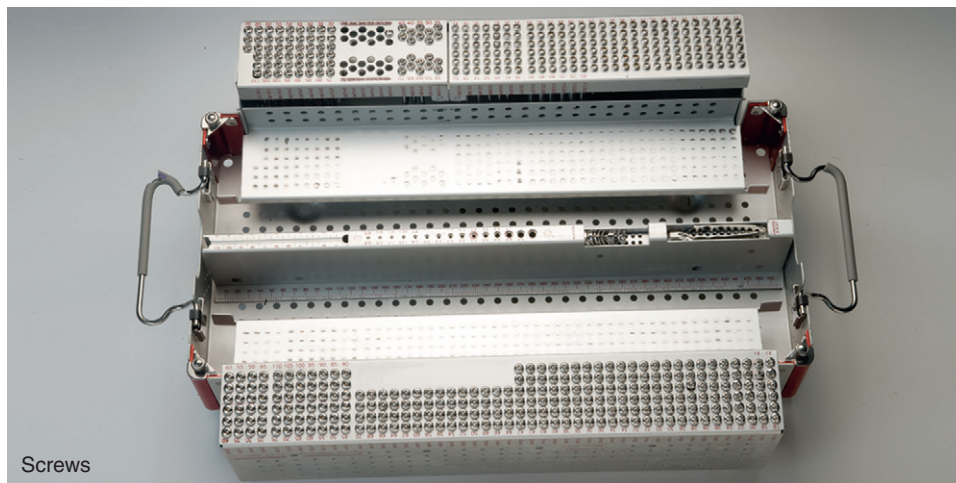
INSTRUMENT SETS



Instruments



Implants



Screws

Instrument: LARGE FRAGMENT SET

Other Names: Large frag set

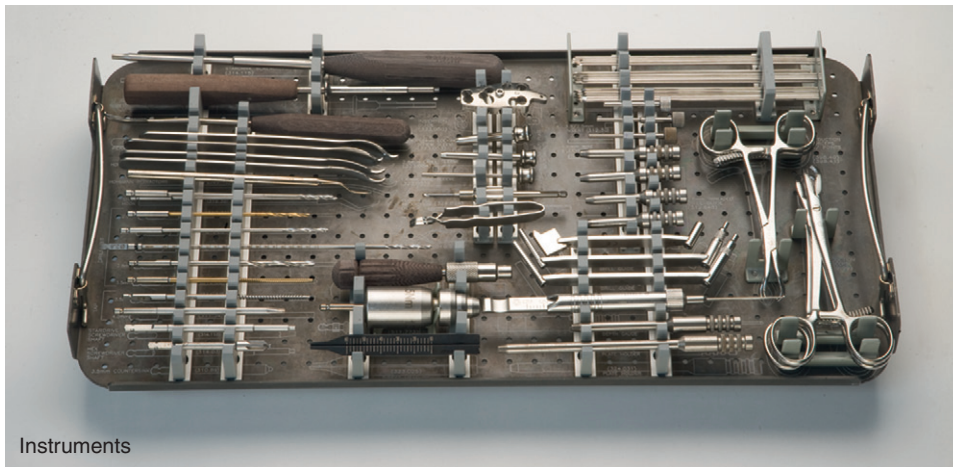
Use(s): These instruments, plates, and screws are used to secure fractures in large bones.

Description: First tray (instruments): Different types of screwdrivers, depth gauge, variety of drill bits, taps, chuck, drill guides, and plate holders.

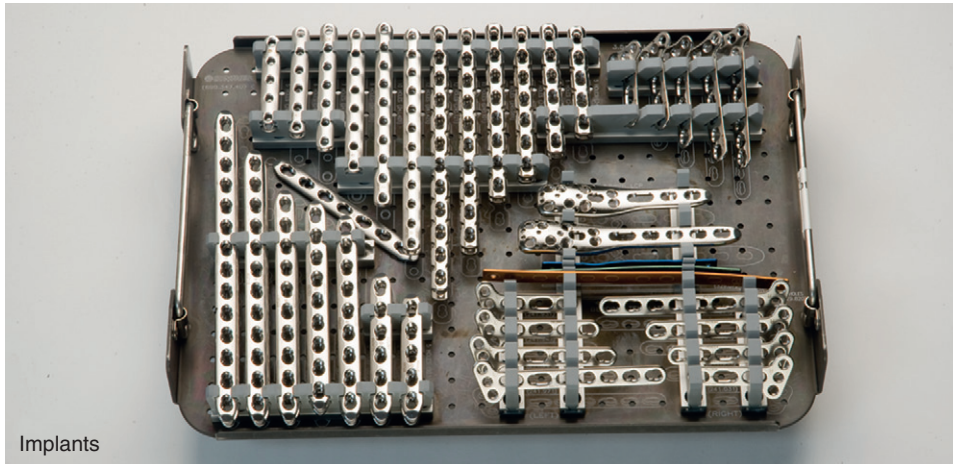
Second tray (implants): Narrow plates, broad plates, T-plates, and bending templates.

Third tray (screws): Variety of screws, locking screws, other implants, and screw forceps.

Instrument Insight: Check surgeon's preference card for type of screws, implants, drill bit sizes, and drill guides. Check each tray before use to determine that all instruments and sizes are in each tray. This is especially needed for screws because they are placed in the patient and not reused.



Instruments



Implants



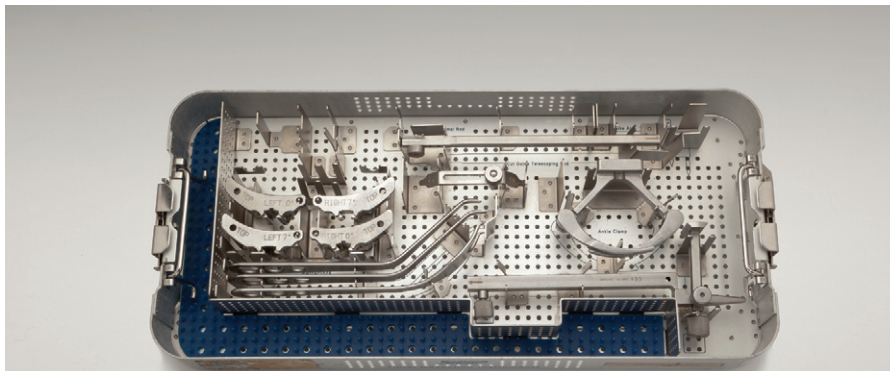
Screws

Instrument: SMALL FRAGMENT SET**Other Names:** Small frag**Use(s):** These instruments, implants, and screws are used to secure fractures in small bones.**Description:** First tray (instruments): Variety of screwdrivers, drill bits, depth gauge, bone holding clamps, and screw retriever.

Second tray (implants and screws): Implants—LCP plates, T-plates, one third tubular, proximal humerus, straight reconstruction plates, curved

reconstruction plates, and oblique and right angle plates; Screws—cortex, cancellous, shaft, and self-tapping; Kirschner wires and washers also in this tray.

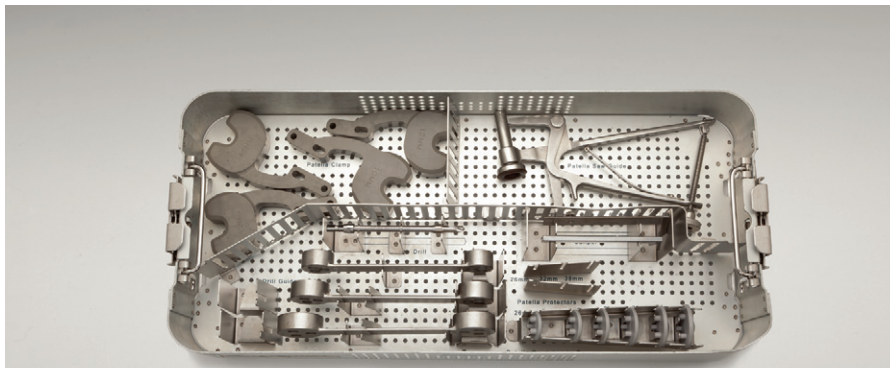
Instrument Insight: Check surgeon's preference card for type of screws, implants, drill bit sizes, and drill guides. Check each tray before use to determine that all instruments and sizes are in each tray. This is especially needed for screws because they are placed in the patient and not reused.



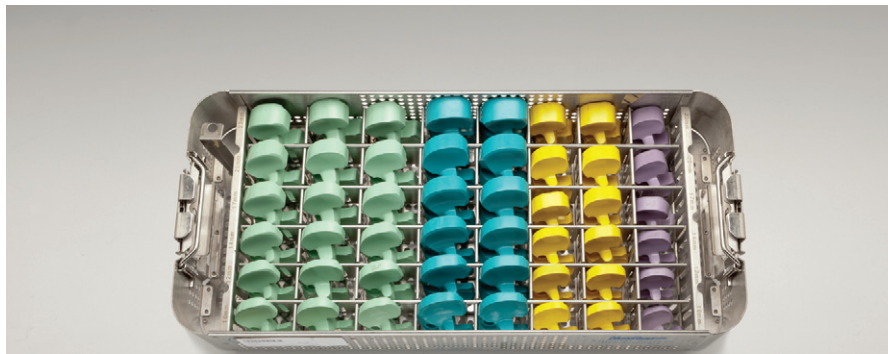
Medullar pan



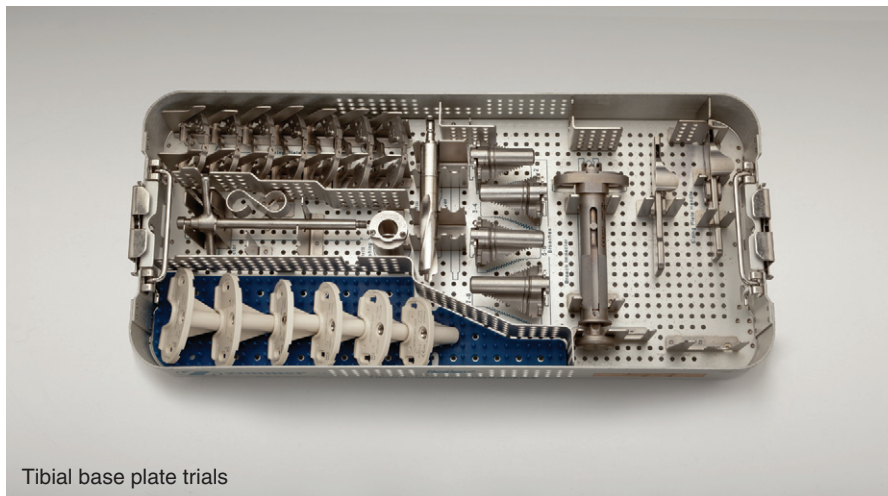
Femoral trials



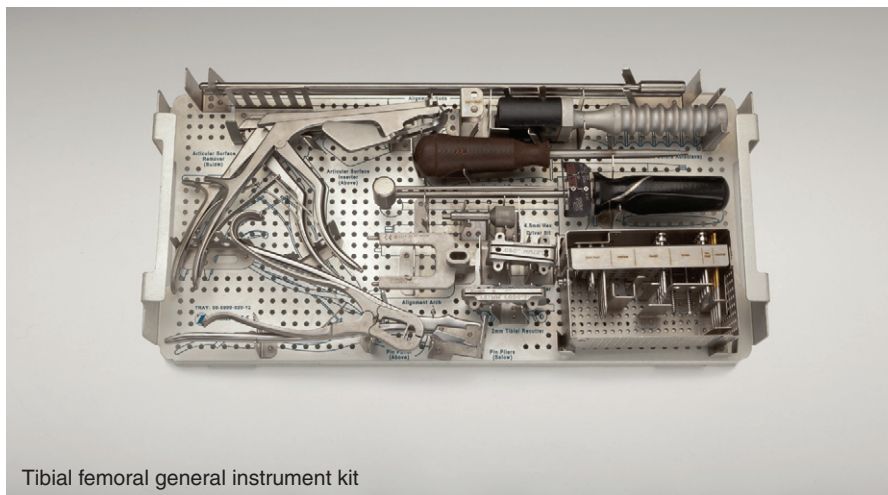
Patella



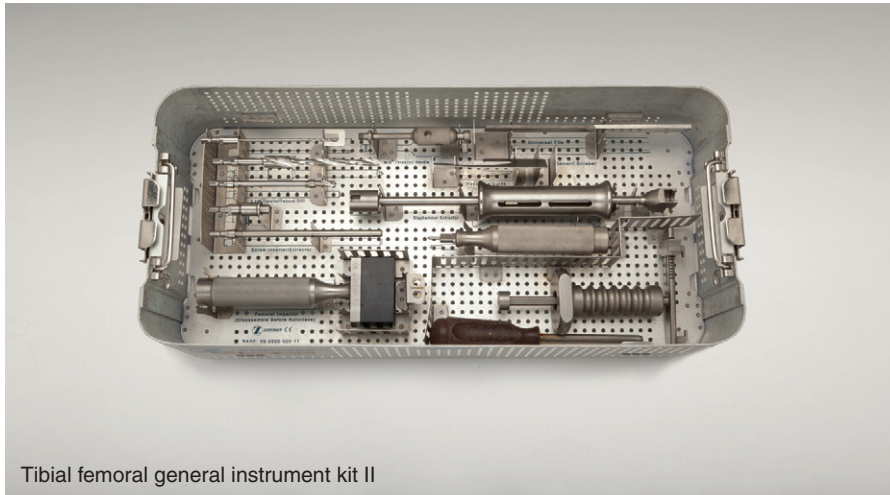
PS trials



Tibial base plate trials



Tibial femoral general instrument kit



Tibial femoral general instrument kit II

Instrument: TOTAL KNEE INSTRUMENTS

Other Names: Knee arthroplasty set

Use(s): These are used to perform a total knee replacement (arthroplasty).

Description: Several pans are opened to perform the arthroplasty. Shown here:

Medullar pan

Femoral trials

Patella

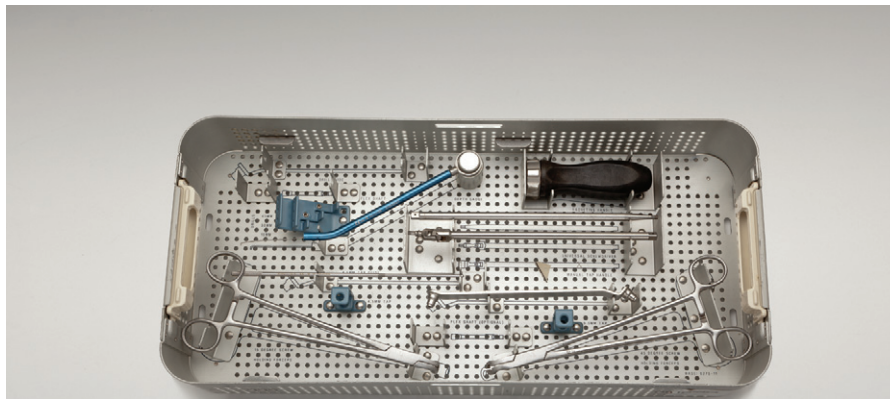
PS trials

Tibial base plate trials

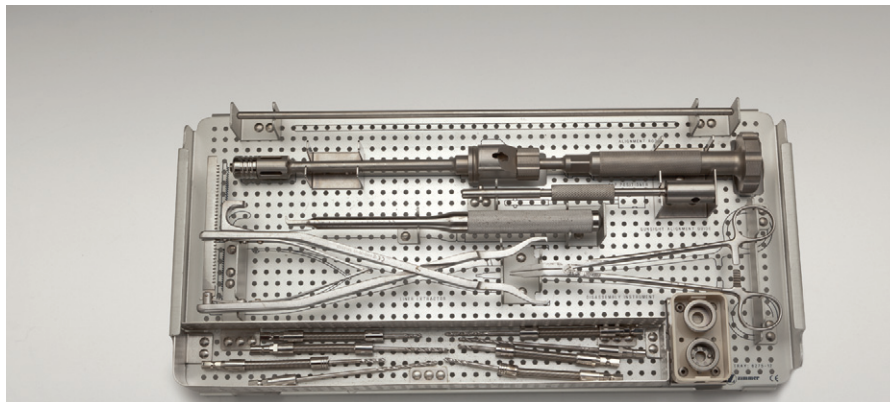
Tibial femoral general instrument kit

Tibial femoral general instrument kit II

Instrument Insight: There are many different systems and companies that have their own systems. Total knee instrument pans are often set by the company sales representative for a specific surgeon or group of surgeons according to their preference; these systems will differ accordingly. These pictures were set up by a Zimmer representative for a specific surgeon. Sets can vary by facility.



Acetabular instrument tray



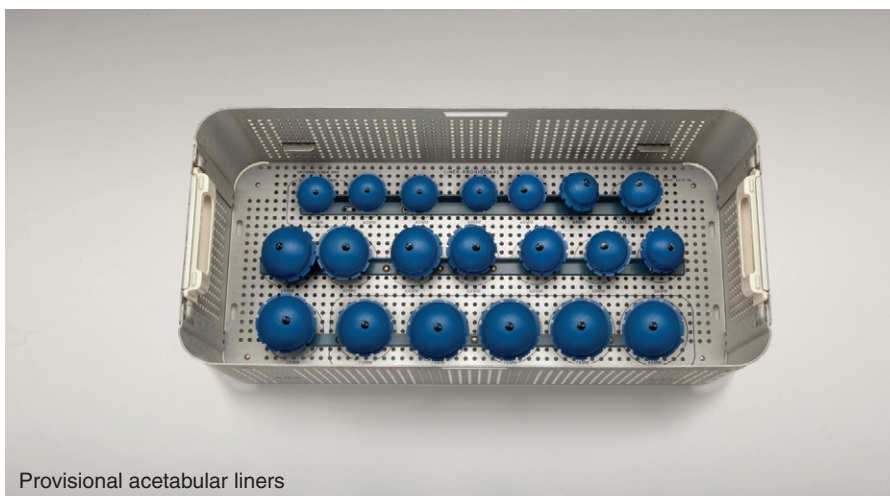
Acetabular instrument tray II



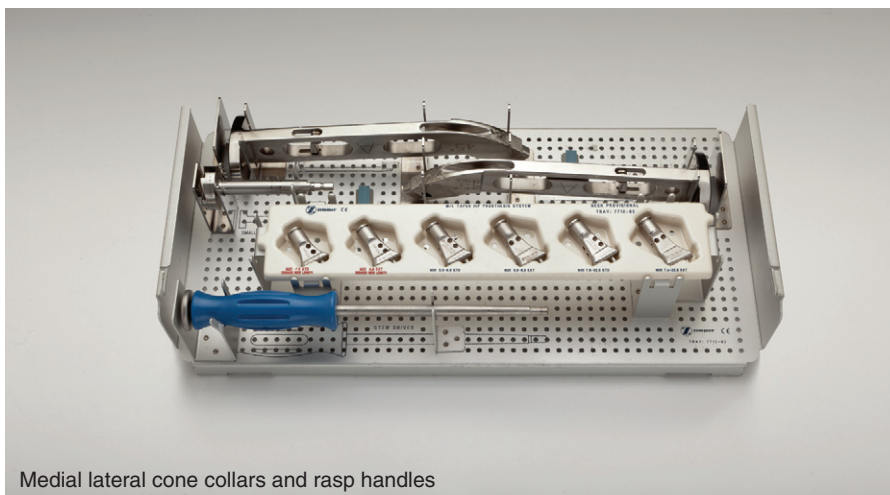
Acetabular reamer set



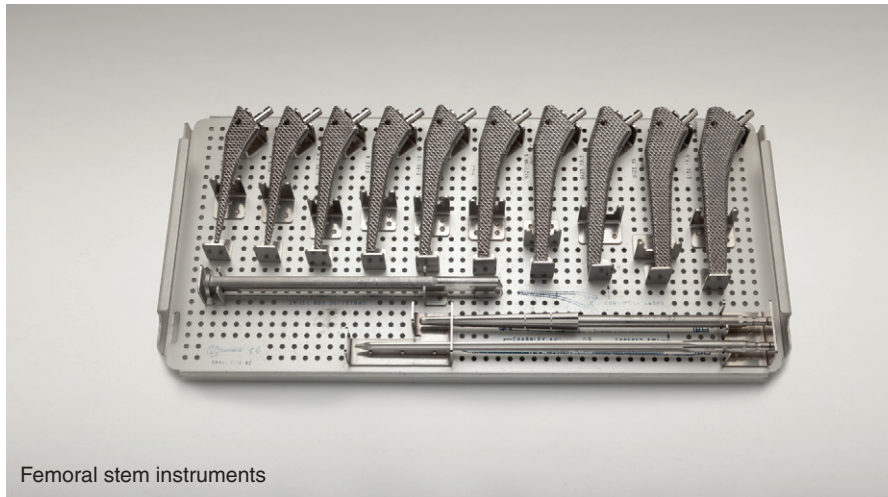
Provisional acetabular shell



Provisional acetabular liners



Medial lateral cone collars and rasp handles



Femoral stem instruments



Femoral head trials

Instrument: TOTAL HIP INSTRUMENTS**Other Names:** Total hip arthroplasty set**Use(s):** These are used to perform a total hip replacement (arthroplasty).

Description: There are several pans that are opened to perform the arthroplasty. Shown here:

- Acetabular instrument tray
- Acetabular instrument tray II
- Acetabular reamer set
- Provisional acetabular shell
- Provisional acetabular liners
- Medial lateral cone collars and rasp handles

Femoral stem instruments

Femoral head trials

Instrument Insight: There are many different systems and companies that have their own systems. Total hip instrument pans are often set by the company sales representative for a specific surgeon or group of surgeons according to their preference; these systems will differ accordingly. These pictures were set up by a Zimmer representative for a specific surgeon. Sets can vary by facility.

Neurosurgical Instruments

ACCESSORY INSTRUMENTS



Instrument: RANEY CLIP APPLIERS

Other Names: Scalp clip applier

Use(s): Used for applying Raney clips to scalp flap edges during a craniotomy.

Description: Finger-ringed ratcheted instrument with heavy, smooth jaws that have a crescent-shaped fenestration, which leads to a flattened tip. The jaws of the applier are spread apart when the instrument is ratcheted down and are brought together when the ratchet is released.

Instrument Insight: To load a clip, the flattened tips of the applier are inserted into the opening on the back of the Raney clip. Upon compression of the ratchet, the jaws and clip open and are ready for application. Each clip controls bleeding only at the site on which it is applied. The length of the incision will determine the number required for hemostasis. Clips are placed along the incision edge with no more than a 1-cm gap between clips.

**Instrument: RANEY CLIPS**

Use(s): Provide hemostasis by compressing the tissue layers of the scalp edges when turning a flap during a craniotomy.

Description: A disposable plastic or reusable metal spring-action clip with wavelike jaws on one side and a slot on the other.

Instrument Insight: The disposable clips are typically packaged in sets of 10 or 20. Several clips must be placed on each side of the incision, so multiple packages may be needed.

**Instrument: SCALP CLIP GUN**

Use(s): Used for providing hemostasis by compressing the tissue layers of the scalp edges when turning a flap during a craniotomy.

Description: A reusable, gun-shaped device with disposable clip cartridges. The system components are a reusable clip gun, disposable scalp clip cartridges, and clip removal forceps.

Instrument Insight: With activation of the trigger, the clip is opened, closed, and released by the

applier. The successive clip automatically slides into position and can be applied in the same manner. The disposable clip cartridge is packaged with 10 clips. Each clip controls bleeding only at the site on which it is applied. The length of the incision will determine the number required for hemostasis. Clips are placed along the incision edge with no more than a 1-cm gap between clips.



Instrument: ANEURYSM CLIP APPLIER
AND CLIPS

Use(s): Used to clip the base or neck of an intracranial aneurysm to isolate it from normal circulation, thus causing it to deflate or obliterate.

Description: A bayoneted spring-action forceps with slotted, inward-curving jaws that grasp around the clip. There are many different manufacturers and a variety of aneurysm clips available for use. Most of the clips are spring-loaded, are made of titanium, and are manufactured in an assortment of types, sizes, shapes, and lengths to accommodate the various needs of the aneurysms (such as location, dimension, and form). Aneurysm clips are classified as permanent or temporary. Temporary clips are used to assure proper position of the permanent clip or to clip the vessels that

supply the aneurysm if rupture occurs or if the aneurysm is very large.

Instrument Insight: There are many different aneurysm clip manufacturers (e.g., Sugita, Yasargil, Sundt, McFadden, and Heifetz).

⚠ CAUTION: An aneurysm clip should never be compressed between the fingers or with any other device; this should only be done with the clip appliers. A clip that has been compressed open should never be used again. The closing force on a clip that has been opened, closed, and opened again can become sprung and endanger the patient.

⚠ CAUTION: Always have a temporary clip loaded in case a rupture occurs.

**Instrument: MALLET**

Use(s): Used to exert force on osteotomes, chisels, gouges, tamps, and other specially designed instruments. Commonly used during spinal surgery to harvest the bone graft.

Description: A solid stainless-steel or brass-filled, stainless steel hammer-like instrument.

Weight is 1 to 3 pounds. Mallets are used in other specialties that involve bone work.

Instrument Insight: Make available after passing any chisel, tamp, etc.

**Instrument: CUSHING BIPOLAR FORCEPS**

Other Names: B.B. forceps (bipolar bayonet)

Use(s): Used for coagulating tissue that is grasped between the tips.

Description: Bayonet-style forceps with fine, smooth tips and an ESU cord connection post at the proximal end. Bipolar forceps can be either insulated or noninsulated.

Instrument Insight: The bipolar forceps uses a disposable cord that attaches to the post end and is then connected to the ESU generator located

off the field. Stepping on a foot pedal activates the bipolar. The electricity travels from the ESU generator, to one tip of the forceps, through the grasped tissue, into the other tip, and back to the generator. The current does not pass through the patient's body, so a dispersive electrode is not needed. The ESU bipolar uses less energy that travels a shorter pathway, and is much safer than the monopolar. Bayonet-shaped instruments are designed so that the user can see beyond his/her fingers.

CLAMPING AND OCCLUDING INSTRUMENTS



Instrument: DANDY HEMOSTATIC FORCEPS

Other Names: Dandy clamp

Use(s): Used for providing hemostasis on the scalp edges when lifting the flap during a craniotomy.

Description: A sideways-curved forceps with horizontal serrations running halfway down the jaws.

CUTTING AND DISSECTING INSTRUMENTS



Instrument: STRULLY SCISSORS

Use(s): Used for blunt and sharp dissection of delicate tissues.

Description: A fine scissors with a slightly curved blade and with crescent-shaped probe tips.

Instrument Insight: The crescent-shaped tips are to protect underlying tissue from trauma

during cutting (e.g., protecting brain tissue when cutting the dura).

⚠ CAUTION: When setting up, always check the screw to ensure it is tightened down and can not fall out into the wound when in use.

**Instrument: TAYLOR DURAL SCISSORS****Other Names:** Angled dura scissors**Use(s):** Extend the incision into the dura mater during a craniotomy.**Description:** An angled bladed scissors with a blunt tip on the lower blade to prevent damage to underlying tissue.**⚠ CAUTION:** When setting up, always check the screw to ensure it is tightened down and can not fall out into the wound when in use.**Instrument: BACON CRANIAL RONGEUR****Use(s):** Removes pieces of bone and the soft tissue surrounding the bone. The Bacon is often used to remove the jagged skull edges when drilling burr holes or creating a flap.**Description:** An angled rongeur with fine, oval-cupped jaws.**Instrument Insight:** Always have a moistened sponge ready when handing the surgeon a

rongeur. As the surgeon works to remove tissue and/or bone, the rongeur has to be cleaned between uses. While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will grasp the tissues from the jaws.

**Instrument: BEYER RONGEUR**

Use(s): Used for removing pieces of bone and the soft tissue surrounding the bone.

Description: Double-action, slightly angled rongeur with broad, elongated, trough-like jaws.

Instrument Insight: The double action gives the rongeur more torque at the tip for better biting action. Always have a moistened sponge ready when handing the surgeon a rongeur. As the surgeon works to remove tissue and/or bone, the rongeur has to be cleaned between uses.

While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will clean the tissue from the jaws. All biting or gripping instruments should be inspected at the cups for chipping and sharpness.

CAUTION: When setting up, always check the screw to ensure it is tightened down and can not fall out into the wound when in use.

**Instrument: ADSON CRANIAL RONGEUR**

Use(s): Used for removing pieces of bone and the soft tissue surrounding the bone.

Description: A straight rongeur with oval cup jaws.

Instrument Insight: Always have a moistened sponge ready when handing the surgeon a

rongeur. As the surgeon works to remove tissue and/or bone, the rongeur has to be cleaned between uses. While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will grasp the tissue from the jaws.

**Instrument: LEKSELL RONGEUR**

Use(s): Used for removing pieces of bone and the soft tissue surrounding the bone. The Leksell is often used in spinal surgery to remove the spinous process.

Description: Double-action, slightly angled rongeur with narrow, trough-like jaws.

Instrument Insight: The double action gives the rongeur more torque at the tip for better biting action. Always have a moistened sponge ready when handing the surgeon a rongeur. As the

surgeon works to remove tissue and/or bone, the rongeur has to be cleaned between uses. While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will grasp the tissues from the jaws.

CAUTION: When setting up, always check the screw to ensure it is tightened down and can not fall out into the wound when in use.

**Instrument: KERRISON RONGEUR**

Other Names: Up-biter

Use(s): Used for removing pieces of bone and lamina during spinal procedures.

Description: Compression handles that are attached to a long shaft with an angled guillotine-style action tip. The tips have a 40° or 90° angle and are either up-biting or down-biting with the dimension of the bite ranging from 1 to 6 mm.

Instrument Insight: Always have a moistened sponge ready when handing the surgeon a

rongeur. As the surgeon works to remove tissue and/or bone, the rongeur has to be cleaned between uses. While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will grasp the tissues from the jaws.

CAUTION: When setting up, always check the screw to ensure it is tightened down and can not fall out into the wound when in use.

**Instrument: CUSHING PITUITARY RONGEUR****Other Names:** Pituitary forceps, bean rongeur**Use(s):** Used for removing herniated disk fragments when performing a discectomy.**Description:** A finger-ringed instrument with a long shaft that extends to narrow, elongated, oval cup jaws. The jaws may be straight, up-angled, or down-angled.**Instrument Insight:** Always have a moistened sponge ready when handing the surgeon a rongeur. As the surgeon works to remove tissue,

the rongeur has to be cleaned between uses. While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will grasp the tissues from the jaws.

CAUTION: When setting up, always check the screw to ensure it is tightened down and can not fall out into the wound when in use.

**Instrument: SPURLING RONGEUR (STRAIGHT)****Use(s):** Used for removing herniated disk fragments when performing a discectomy.**Description:** A finger-ringed instrument with a long shaft that extends to oval cup jaws. The jaws may be straight, up-angled, or down-angled.**Instrument Insight:** Always have a moistened sponge ready when handing the surgeon a rongeur. As the surgeon works to remove tissue, the rongeur has to be cleaned between uses.

While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will grasp the tissues from the jaws.

CAUTION: When setting up, always check the screw to ensure it is tightened down and can not fall out into the wound when in use.

**Instrument: PEAPOD RONGEUR**

Use(s): Used for removing herniated disk fragments when performing a discectomy.

Description: A finger-ringed instrument with a long shaft that extends to upward-bent, oval cup jaws.

Instrument Insight: Always have a moistened sponge ready when handing the surgeon a rongeur. As the surgeon works to remove tissue and/or bone, the rongeur has to be cleaned between uses. While focusing on the wound, the

surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will grasp the tissues from the jaws.

⚠ CAUTION: When setting up, always check the screw to ensure it is tightened down and can not fall out into the wound when in use.

**Instrument: WILDE RONGEUR**

Other Names: Fenestrated

Use(s): Used for removing herniated disk fragments when performing a discectomy.

Description: A finger-ringed instrument with a long shaft that extends to eye-shaped, fenestrated-cupped jaws. The jaws can be straight or up-angled.

Instrument Insight: Always have a moistened sponge ready when handing the surgeon a rongeur. As the surgeon works to remove tissue

and/or bone, the rongeur has to be cleaned between uses. While focusing on the wound, the surgeon will point the tip of the rongeur toward the surgical technologist. Using a moistened sponge, the surgical technologist will grasp the tissues from the jaws.

⚠ CAUTION: When setting up, always check the screw to ensure it is tightened down and can not fall out into the wound when in use.

**Instrument: #1 PENFIELD DISSECTOR**

Use(s): Used for retracting, manipulating, and dissecting of nerves, vessels, bone, and tissues during craniotomies, carotid endarterectomies, and spinal procedures.

Description: A double-ended instrument with a broad, curved dissector at one end and a sharp, round spoon at the other end.

**Instrument: #2 PENFIELD DISSECTOR**

Use(s): Used for retracting, manipulating, and dissecting of nerves, vessels, bone, and tissues during craniotomies, carotid endarterectomies, and spinal procedures.

Description: Double-ended instrument with a slightly curved dissector at one end and a wax packer at the other end.

**Instrument: #3 PENFIELD DISSECTOR**

Use(s): Used for retracting, manipulating, and dissecting nerves, vessels, bone, and tissues during craniotomies, carotid endarterectomies, and spinal procedures.

Description: Double-ended instrument with a full curved dissector at one end and a wax packer at the other end.

**Instrument: #4 PENFIELD DISSECTOR**

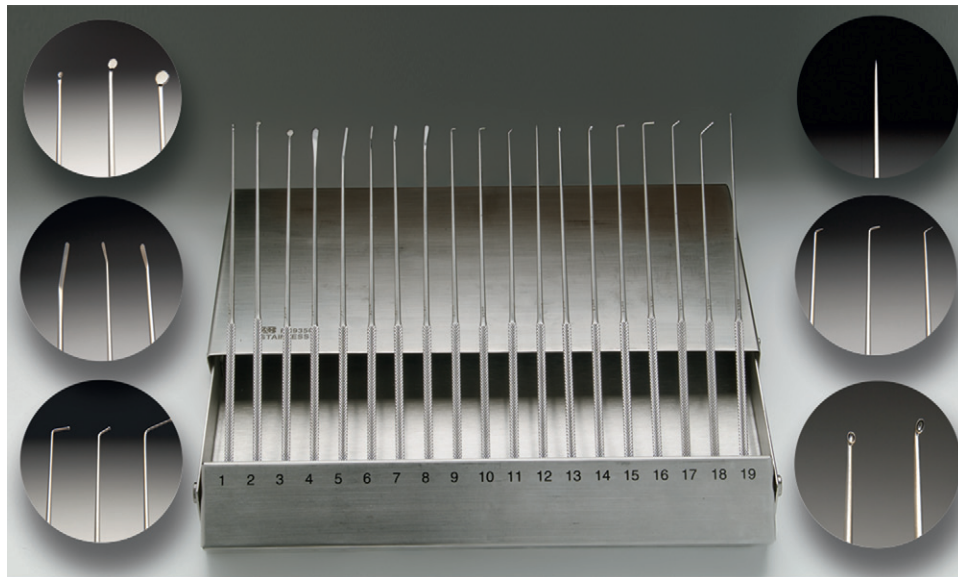
Use(s): Used for retracting, manipulating, and dissecting nerves, vessels, bone, and tissues during craniotomies, carotid endarterectomies, and spinal procedures. The Penfield #4 is commonly used to remove arterial plaque from the walls of the carotid artery.

Description: Has a solid, round handle with a slightly curved dissector at the working end.
Instrument Insight: Small balls of bone wax are pressed onto the tip and then are smeared on the cranial edges for hemostasis.

**Instrument: #5 PENFIELD DISSECTOR**

Use(s): Used for retracting, manipulating, and dissecting nerves, vessels, bone, and tissues during craniotomies, carotid endarterectomies, and spinal procedures.

Description: Double-ended flattened dissector with a full curved dissector at one end and a slightly curved blunt dissector at the other end.

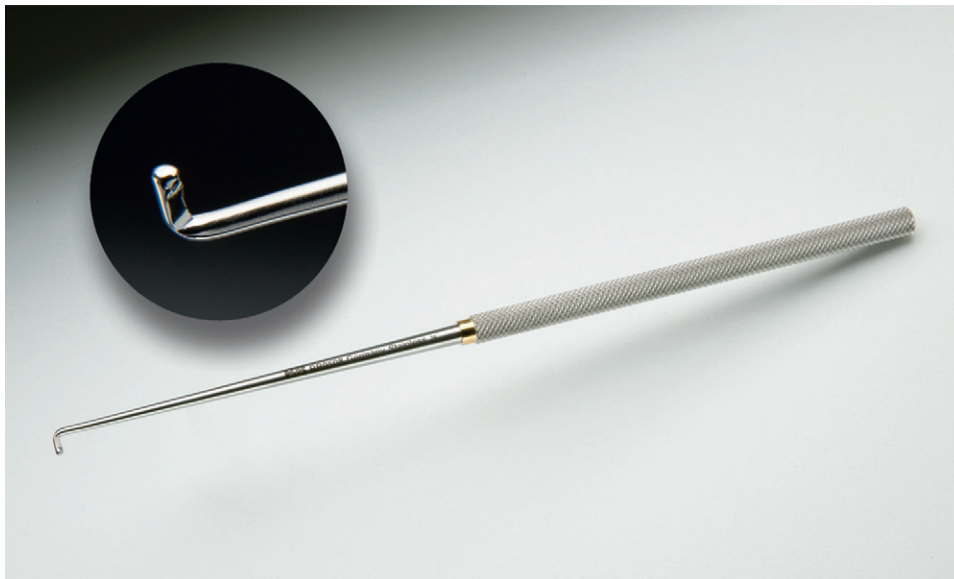
**Instrument: RHOTON DISSECTOR EXTENDED SET**

Use(s): Used for manipulation and dissection of very fine nerves, tissues, and tumors of the brain when performing a craniotomy.

Description: Extremely precise and delicate micro dissecting instruments. The Rhoton set contains

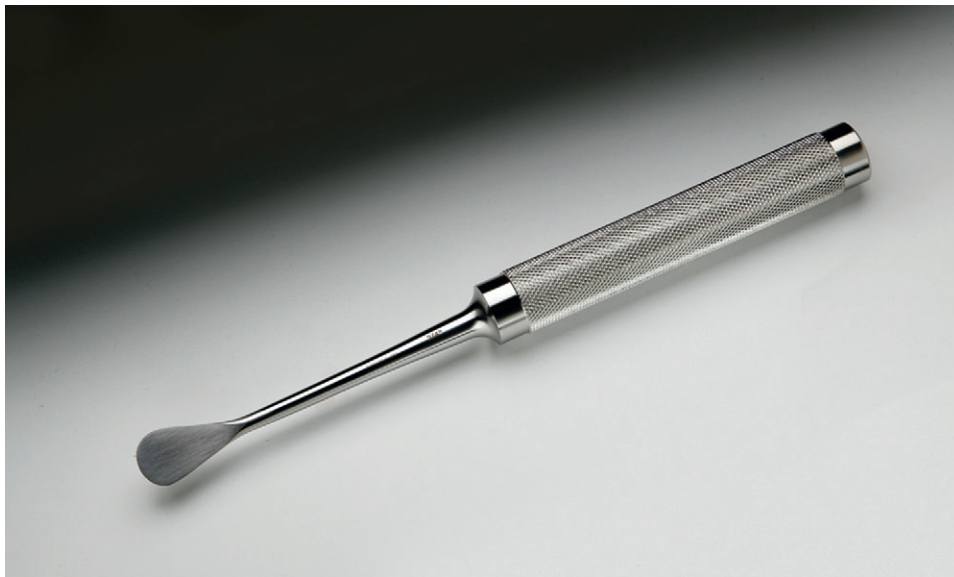
round and spatula micro dissectors, micro hooks, micro curettes, micro needlepoint, and micro elevators.

Instrument Insight: These instruments should be wiped clean after every use with a moistened sponge. They are very delicate and should be handled with extreme care.

**Instrument: MICRO KNIFE**

Use(s): Used for dissection of very fine nerves, tissues, and tumors of the brain when performing a craniotomy.

Description: A round grip handle with a right hook at the distal end that has a sharp edge on the inner side.

**Instrument: COBB ELEVATORS**

Use(s): Used for stripping the paraspinal muscles and the periosteum off the laminae. This is done when performing a laminectomy during spinal surgeries.

Description: An elongated, solid, rounded grip handle that extends to a narrowed, smooth shaft

that terminates with a flat, broad, tear-shaped, sharp working end.

Instrument Insight: As the area is stripped, Raytex sponges that have been opened are packed along the side of the spine to compress the bleeding.

**Instrument: COBB CURETTES**

Use(s): Used for scraping bone during spinal surgery.

Description: An elongated, solid, round grip handle that extends to a narrowed, smooth shaft

that terminates with a sharp-edged, oval-scooped working end. The tips may be straight, angled, or reverse-angled.

**Instrument: COBB RING CURETTES**

Use(s): To strip muscle and the periosteum off bone.

Description: An elongated, solid, round grip handle that extends to a narrowed, smooth

shaft that terminates with a sharp ring-shaped working end.



Instrument: ADSON PERIOSTEAL ELEVATOR

Other Names: Joker

Use(s): Used for elevating the skull off the dura when turning a flap or for scraping the periosteum off bone.

Description: A narrowing handle that leads to a flattened, curved, rounded tip.



Instrument: HOEN PERIOSTEAL ELEVATOR

Use(s): Used for reflecting the scalp flap off the skull and/or scraping the periosteum off the skull when creating a bone flap during a craniotomy procedure.

Description: A smooth, elongated handle that extends to a narrowed, smooth shaft that terminates with a flattened, broad, rounded, sharp working end.



Instrument: LANGENBECK PERIOSTEAL ELEVATOR

Use(s): Used for reflecting the scalp flap off the skull and/or scraping the periosteum off the skull when creating a bone flap during a craniotomy procedure.

Description: A smooth, elongated, concave handle that extends to a narrowed, smooth shaft that terminates with a flattened, fan-shaped, sharp working end.



Instrument: WOODSON ELEVATOR

Use(s): Used for separating the dura from the cranium when creating a burr hole or turning a bone flap.

Description: Double-ended instrument with slightly angled, rounded spatula ends, with one end being wider than the other.



Instrument: SPINAL CURETTES

Other Names: Brun curettes

Use(s): To scrape out bone and tissue.

Description: This is a small spoon-like instrument with sharp edges. The tips can be straight, angled, or reverse-angled. They come in a variety of sizes.



Instrument: MIDAS REX DRILL

Use(s): Used for perforating the skull when creating burr holes or for turning a bone flap during a craniotomy.

Description: This is a high-speed pneumatic drill that is activated by a foot pedal. The hand piece

has multiple attachments with disposable burs and blades.

Instrument Insight: As the burr holes and/or flap are prepared, the bit of the drill should be irrigated with saline to reduce the heat and bone dust that is generated from the friction.



Instrument: HUDSON HANDHELD DRILL

Other Names: Hudson brace

Use(s): Used for perforating the skull when creating burr holes.

Description: A hand-held drill with a stabilizing handle on the proximal end that is in succession with a handle that rotates in a circle. The distal

end has a thumbscrew chuck, which locks the bits in place. The bits come in a variety of shapes and sizes.

Instrument Insight: The perforator bit has a sharp cutting point that is designed to penetrate the skull. The burr bits are rounded and are used to enlarge the hole made by the perforator.



Instrument: RHOTON MICRO SCISSORS

Other Names: Micro scissors

Use(s): Used for micro dissection of delicate tissues.

Description: Fine spring-operated scissors that may be curved or straight.



Instrument: RHOTON MICRO BAYONET SCISSORS

Use(s): Used for micro dissection of delicate tissues.

Description: Bayonet-style spring-action scissors that can have curved or straight blades.

Instrument Insight: Bayonet-shaped instruments are designed so that the user may see beyond his/her fingers.



Instrument: ADSON HYPOPHYSEAL CUP TISSUE FORCEPS

Other Names: Baskin Robin, cup forceps, scoop forceps

Use(s): Used for grasping and removing tumors.

Description: Bayonet-shaped grasping forceps with a smooth cup tip.

Instrument Insight: Bayonet-shaped instruments are designed so that the user may see beyond his/her fingers. Tissue is removed from the cups with a moistened sponge.

GRASPING AND HOLDING INSTRUMENTS



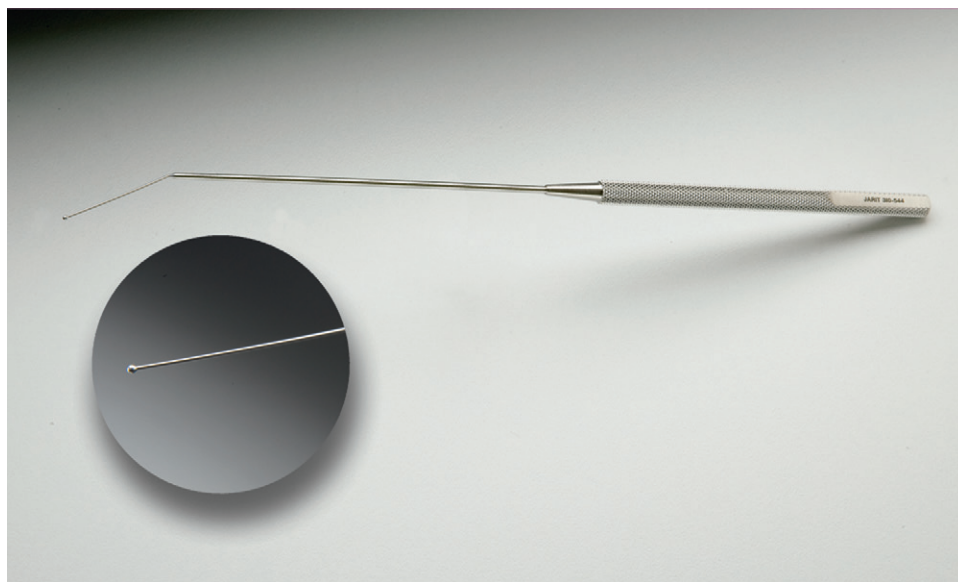
Instrument: CUSHING BAYONET TISSUE FORCEPS

Use(s): Used for grasping delicate tissues.

Description: Bayonet-shaped grasping forceps with serrated blunt tips.

Instrument Insight: Bayonet-shaped instruments are designed so that the user may see beyond his/her fingers.

PROBING AND DILATING INSTRUMENTS



Instrument: BALL TIP PROBE

Use(s): Used for manipulating and probing blood vessels, nerves, and brain tissues.

Description: A round handle with a straight probe that leads to an angled wire with a solid ball tip.

RETRACTING AND EXPOSING INSTRUMENTS



Instrument: DAVIS BRAIN SPATULAS

Other Names: Baby ribbons

Use(s): Retract the brain and tissues during a craniotomy.

Description: These are small, hand-held, malleable, smooth, flat, metal ribbons with

rounded ends. The widths vary from ¼ inch to 1 ½ inches.

Instrument Insight: An assortment of sizes should be included in the set. Brain spatulas should always be moistened before being placed on the brain.

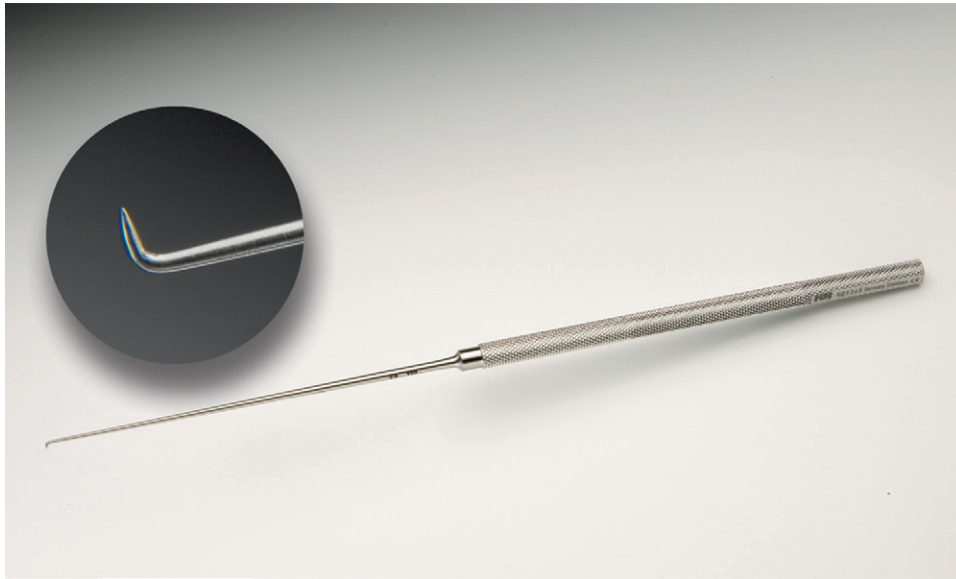


Instrument: SCOVILLE BRAIN SPATULAS

Use(s): Retract the brain and tissues during a craniotomy.

Description: These are small, handheld, double-ended, malleable, flat retractors with squared, blunt ends. One end is larger than the other end.

Instrument Insight: Brain spatulas should always be moistened before being placed on the brain.



Instrument: DURA HOOK

Use(s): Used for elevating the dura.

Description: A sharp, right-angle hook with a round handle.

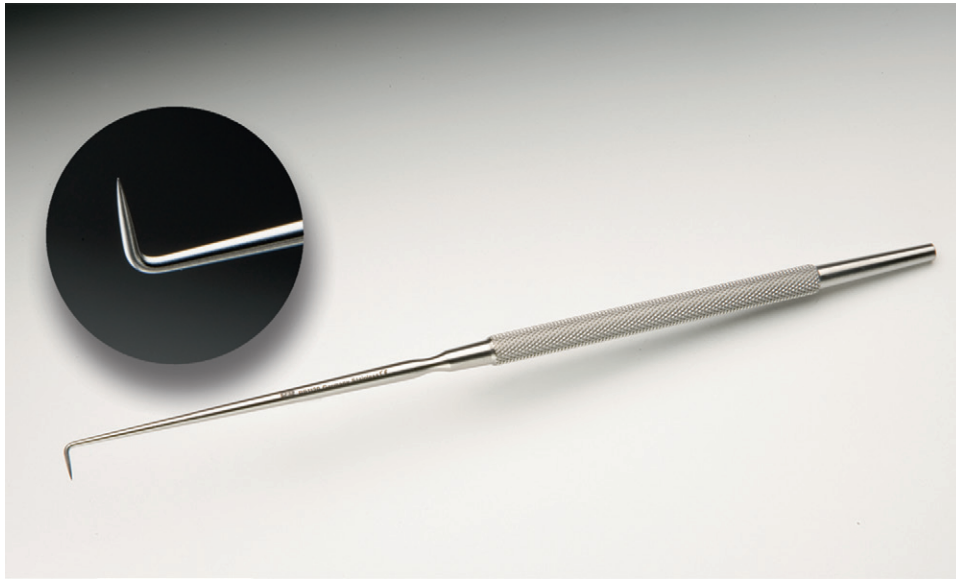
Instrument Insight: Exercise care when handling this sharp hook because it can easily compromise the integrity of your gloves or those of the surgeon.



Instrument: WOODSON DURA SEPARATOR

Use(s): Separates the dura from the cranium when creating a burr hole or turning a bone flap.

Description: Double-ended instrument with a slightly angled, rounded spatula on one end and a blunt probe on the other end.

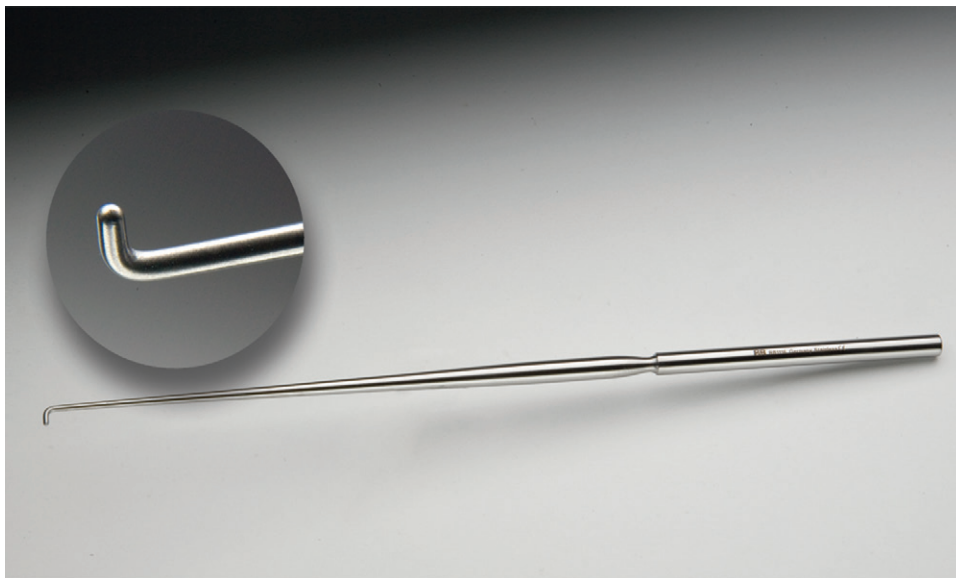


Instrument: ADSON HOOK, SHARP

Use(s): Used for elevating the dura.

Description: A sharp, right-angle, elongated hook with a round handle.

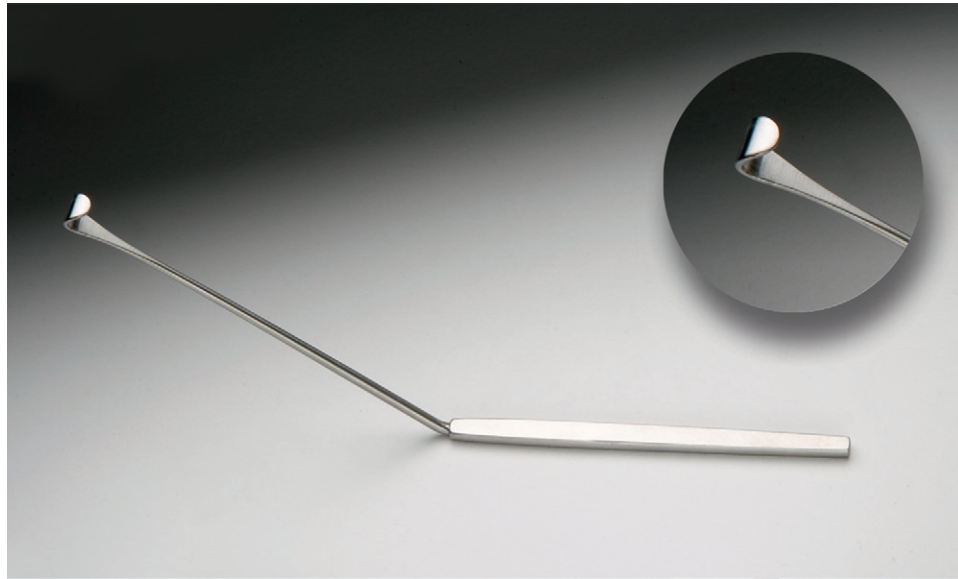
Instrument Insight: Exercise care when handling this sharp hook because it can easily compromise the integrity of your gloves or those of the surgeon.



Instrument: DANDY NERVE HOOK

Use(s): Used for manipulation, probing, and dissection of very fine nerves, tissues, and vessels.

Description: A blunt, right-angle hook with a round handle.



Instrument: LOVE NERVE ROOT RETRACTOR (ANGLED)

Use(s): Used for retracting the dura and the nerve root.

Description: A flattened handle that extends to a long, round shaft with a smooth, cup-shaped, curved blade with a crescent-shaped lip. The shaft of the retractor can be straight or angled.

Instrument Insight: To prevent damage to the nerve root, the retractor should not be moved after it has been placed by the surgeon. Because of the delicate nature of the tissue, care should be taken to not pull on the retractor but simply hold it in place.



Instrument: SCOVILLE NERVE ROOT RETRACTOR (ANGLED)

Use(s): Used for retracting the dura and the nerve root.

Description: A round, tapered handle that extends to a long, round shaft with a smooth, flattened, elongated blade with a crescent-shaped lip. The shaft of the retractor can be straight or angled.

Instrument Insight: To prevent damage to the nerve root, the retractor should not be moved after it has been placed by the surgeon. Because of the delicate nature of the tissues, care should be taken to not pull on the retractor but simply hold it in place.

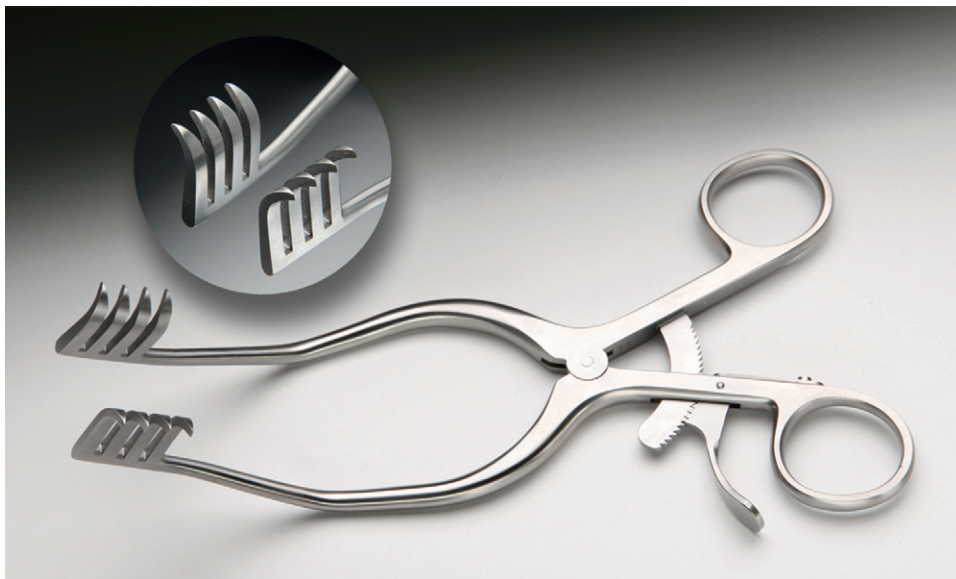
**Instrument: BECKMAN RETRACTOR**

Use(s): Used for retracting the wound edges during spinal surgery.

Description: Self-retaining, finger-ringed instrument with a ratcheted/release device on the shanks. Two hinged arms extend from the shank to three outward-curved prongs on one side and four on the other. These prongs can be sharp or dull.

Instrument Insight: Always hand this retractor to the surgeon with the prongs pointing down.

⚠ CAUTION: The prongs may be very sharp. Exercise care when handling sharp instruments to avoid puncture to gloves and/or skin.

**Instrument: CEREBELLAR RETRACTOR**

Use(s): Used for retracting the scalp flap.

Description: Self-retaining, finger-ringed instrument with a ratcheted/release device on the shanks. Two arms extend from the shank to four outward-curved prongs on each. These prongs can be sharp or dull.

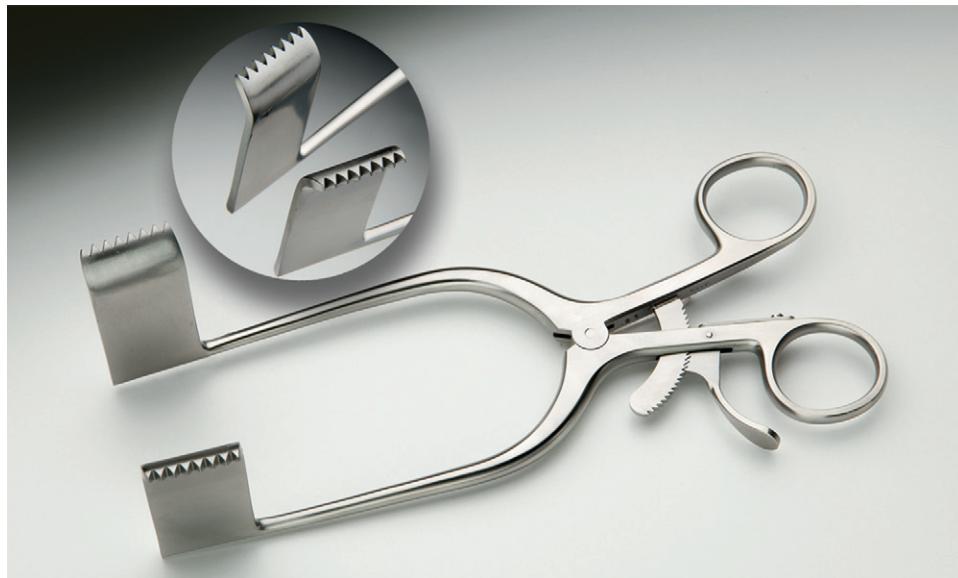
Instrument Insight: Always hand this retractor to the surgeon with the prongs pointing down.

⚠ CAUTION: The prongs may be very sharp. Exercise care when handling sharp instruments to avoid puncture to gloves and/or skin.

**Instrument: LEYLA RETRACTOR****Other Names:** Fukushima, Leyla-Yasargil**Use(s):** Used to sustain gentle retraction of brain and neural tissues.**Description:** Self-retaining table mounted retractor. This retractor has table clamps, U-bars, C-clamps, and snake arms. The flexible snake arms consist of a series of small metal tubes joined by a ball and socket. They are held together by a tension cable running through the middle of them, which is tightened by turning

the knob on the distal end. When the cable is tightened the numerous metal components become rigid, thus maintaining the position in which they were placed. The brain spatulas are attached to the distal end of these flexible arms. At the proximal end the arms are fixed to a C-clamp, which allows the arms to be slid onto the U-bar.

CAUTION: Care should be taken not to inadvertently bump the retractor after it is placed.

**Instrument: MEYERDING LAMINECTOMY RETRACTOR****Use(s):** Used for deep retraction during spinal surgery.**Description:** Self-retaining, finger-ringed instrument with a ratcheted/release device

on the shanks. Two arms extend from the shank to two outward-curved blades with multiple V-shaped teeth on each.

Instrument Insight: Always hand this retractor to the surgeon with the teeth pointing down.



Instrument: WILLIAMS HEMILAMINECTOMY RETRACTORS

Other Names: Meyerding hemilaminectomy retractor

Use(s): Used for deep retraction during spinal surgery. Used when the lamina is being removed on one side of the spine only.

Description: Self-retaining, finger ringed instrument with a ratcheted/release device

on the shanks. Two arms extend from the shank to an outward-curved blade with multiple V-shaped teeth on one side; the other arm has a sharp, angled prong. The blade will be on the right or the left side.

Instrument Insight: The surgeon will ask for a right or a left Williams retractor. Right or left is determined by which side contains the blade.



Instrument: MEYERDING HANDHELD RETRACTOR

Use(s): Retracts wound edges.

Description: Smooth-grip handle with a lateral-curved blade with multiple V-shaped teeth on the lip.



Instrument: DAVIS SCALP RETRACTOR

Use(s): Used for retracting the scalp when creating burr holes.

Description: A small self-retaining retractor with a screw-locking mechanism that has two elongated

downward-curving arms with three outward (dull) curved prongs at each tip.



Instrument: JANSEN SCALP RETRACTOR

Use(s): Used for retracting the scalp when creating burr holes.

Description: A small self-retaining retractor with a screw-locking mechanism that has two arms with three outward-curved (dull) prongs at each tip.

**Instrument: SCOVILLE RETRACTOR**

Other Names: Scofield/Meyerding self-retaining retractor

Use(s): Used for retracting wound edges during lumbar procedures.

Description: This is a key-ratcheted self-retaining frame with an interchangeable blade mechanism at the end of each arm. The interchangeable blades come in various sizes and styles.

**Instrument: ACF RETRACTOR**

Use(s): Retracts wound edges during an anterior cervical discectomy and fusion.

Description: A self-retaining retractor with two different style frames and a variety of interchangeable blades.



Instrument: CLOWARD VERTEBRA SPREADER

Use(s): Used for opening the vertebral space.

Description: This is a key-ratcheted device that has downward angle shanks with smooth,

slightly outward bending jaws. The inner jaws are smooth, and they square off at the tips. On the outer edge is a small, crisscrossed grip patch.



Instrument: CLOWARD CERVICAL RETRACTOR

Use(s): Used for retracting the wound during a cervical discectomy and fusion.

Description: A solid grip handle with a smooth, elongated 45°-angle blade that has a crescent-shaped lip.



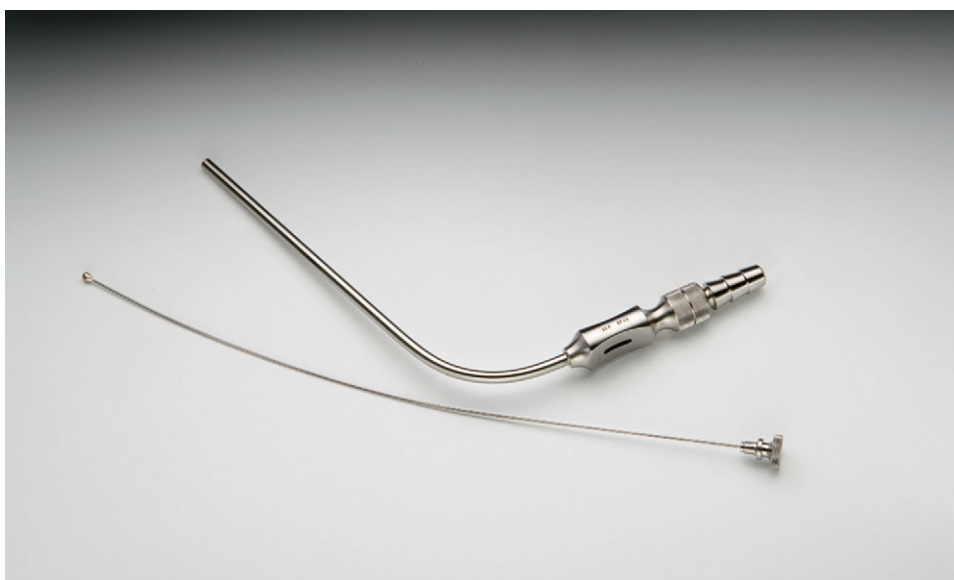
Instrument: TAYLOR SPINAL RETRACTOR

Use(s): Used for wound retraction during lumbar spinal procedures.

Description: This is a flat, stainless steel strip with a lateral-curved blade and a sharp V-shaped tip on

the end. The width and length vary according to need.

SUCTIONING AND ASPIRATING INSTRUMENTS



Instrument: POPPEN SUCTION TIP

Use(s): Used for suctioning in confined spaces such as the nasal cavity and during lumbar and cervical procedures or craniotomies.

Description: An angled, malleable, cylindrical tube with a relief opening/hole on the handgrip. The diameter of the suction tube is measured on the French (Fr) scale and ranges from 6Fr to 12Fr.

Instrument Insight: Usually is packaged with a metal stylet, which fits inside the cylinder. The stylet is used to maintain patency of the suction tube by relieving tissue, debris, blood, and other materials that may be caught inside the tube during suctioning. The suction is increased by covering the relief opening/hole.

**Instrument: TEARDROP SUCTION TIP**

Other Names: Fukushima

Use(s): Used for suctioning of tissue, especially in hard-to-reach areas.

Description: This is a malleable, cylindrical tube with a teardrop-shaped control relief opening/hole on the handgrip. The diameter of the suction tube is measured on the French scale and ranges from 3Fr to 12Fr.

Instrument Insight: The malleable shaft gives the surgeon additional flexibility to adjust the configuration of the suction tube as necessary, allowing access in cases where difficult patient anatomy or tumor location may prevent the use of standard suction tubes. The suction is increased by covering the relief opening/hole.

SUTURING AND STAPLING INSTRUMENTS

**Instrument: RHOTON MICRO NEEDLE HOLDERS**

Use(s): Used for holding very fine suture needles during microsurgical procedures.

Description: Bayonet-style spring-locking needle holder with curved or straight fine jaws.

Instrument Insight: Bayonet-shaped instruments are designed so that the user may see beyond his/her fingers.



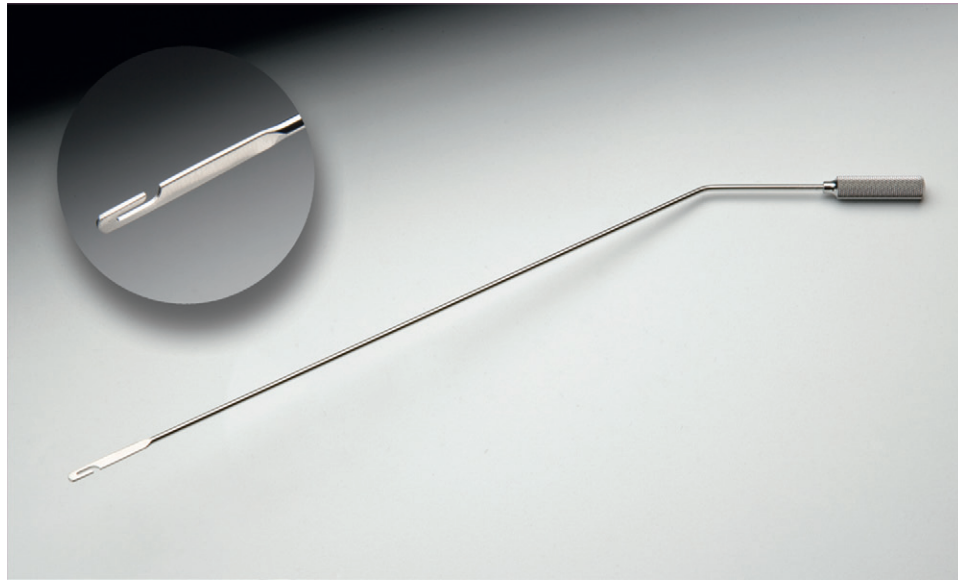
Instrument: JACOBSEN NEEDLES HOLDER

Use(s): Used for holding very fine suture needles during microsurgical procedures.

Description: Spring-locking needle holder with curved or straight fine jaws.

Cardiovascular Thoracic Instruments

ACCESSORY INSTRUMENTS



Instrument: RUMEL TOURNIQUET HOOK (STYLET)

Use(s): The surgeon encircles a vessel with umbilical tape or a vessel loop, and the loose ends are caught with the hook, pulled through a red rubber catheter shod or a plastic factory-made tubing tourniquet, and held taut with a hemostat to control flow in the vessel. Purse

strings are also “snagged” this way when placing a cannula.

Description: Instrument has a hook or eyelet at the distal end.

Instrument Insight: Caution should be used when pulling the strings through the tourniquet because some tissues, such as an atrial appendage, are very fragile.



Instrument: ENDOPATH THORACIC TROCAR

Other Names: Thoracoport, Flexipath

Use(s): The thoracic trocar sleeve is used for an access port to internal organs in thoracoscopic procedures and other minimally invasive procedures that do not require insufflation.

Description: This trocar has a round tipped obturator and a thoracic sleeve with stability threads.

Instrument Insight: There are many different manufactures of these types of trocars, so there may be a variety of different styles.



Instrument: BLUNT HOOK

Other Names: Nerve hook

Use(s): Used for “snagging” tangled or knotted fine suture. Also used for manipulating the leaflets in valve surgeries.

Description: This instrument has a right-angled hook.

Instrument Insight: This instrument can also be used to retract strings during placement of sutures during anastomosis.

CLAMPING AND OCCLUDING INSTRUMENTS



Instrument: VORSE TUBING OCCLUDING CLAMP

Other Names: Tube clamp

Use(s): This clamp is used to clamp off tubing and cannulas.

Description: A heavy instrument with ratchet handles and nonslip jaws.

Instrument Insight: Perfusionists use these on the heart-lung machine during bypass surgery; tube clamps are also used on the sterile field.



Instrument: DEBAKEY BULLDOG

Other Names: Bulldog

Use(s): Used for clamping off the flow in a vessel.

Description: This is a cross-action clamp. The jaws vary in length and can be straight or

curved. The jaws are serrated with the DeBakey design.

Instrument Insight: This is often used to mark the end of a vein graft to specify flow direction.

**Instrument: DIETHRICH BULLDOG**

Use(s): This small clamp is used to impede the flow in a vessel.

Description: This is a fine cross-action clamp. It can be straight or angled.

Instrument Insight: This is used more often than the heavier bulldog because there is less trauma to the vessel.

**Instrument: GLOVER BULLDOG**

Use(s): This is used to stop flow in a vessel and to clamp vessel loops encircling a vessel.

Description: This clamp is available in a variety of lengths. Serrations in the jaws are of the Cooley design.

Instrument Insight: This is seldom used because the Cooley jaws are more crushing.



Instrument: HEMOCLIP APPLIERS

Other Names: Ligaclip applier

Use(s): This instrument is used to clip side branches on vessels instead of tying with suture material.

Description: These appliers are available in small, medium, medium/large, and large sizes.

They can also have an angled end. The clip bars that hold the actual clips come in the colors red, blue, green, and orange, and the applier handles have the same color.

Instrument Insight: “Load” by pushing instrument jaws onto clip and lifting. The surgeon “fires” the clip by squeezing the handles.



Instrument: COOLEY CLAMP

Other Names: Angled clamp

Use(s): Used for total occlusion of a vessel.

Description: This instrument has ratcheted handles and jaws. The angle is 45° or 55°. Serrations are of the Cooley design.

Instrument Insight: The ratchets allow the surgeon to adjust the clamp according to the blood pressure inside the vessel. They also allow gradual increase or decrease of blood flow.



Instrument: SATINSKY VENA CAVA CLAMP

Other Names: Satinsky partial occlusion clamp

Use(s): Used for partially occluding vessels.

Description: This is a partial occlusion clamp. The clamp comes in a variety of lengths, with

noncrushing jaws of the DeBakey design and ratchet handles.

Instrument Insight: This clamp is sometimes used to encircle the superior or inferior vena cava before placement of umbilical tape around the vessel. It is also sometimes used to clamp the atrial appendage.



Instrument: GLOVER PATENT DUCTUS CLAMP

Use(s): This clamp can have a variety of uses and is a total occlusion clamp.

Description: This clamp is straight or angled slightly. They have ratcheted handles and DeBakey design serrated jaws.

Instrument Insight: Ratchets allow the doctor to adjust the clamp according to the blood pressure inside the vessel. They also allow gradual increase or decrease of blood flow.



Instrument: BECK AORTIC CLAMP

Other Names: Pedicle clamp

Use(s): This is a partial occlusion clamp used in deep areas; it can also be used as a total occlusion clamp on larger vessels.

Description: This clamp comes in varying sizes, as do the jaws. They have the DeBakey design jaw serrations.



Instrument: JAVID CAROTID ARTERY CLAMP

Other Names: Javid carotid shunt clamp

Use(s): Used during a carotid endarterectomy procedure to secure the Javid shunt in the carotid artery when diverting the blood flow away from the operative site.

Description: A ratcheted, angled clamp in which the tip of each jaw is a half-circle that clamps around the artery and the shunt to hold it in place.
Instrument Insight: This can be used with other shunts as well as for holding introducers in place during endovascular procedures.



Instrument: FOGARTY CLAMP WITH JAW INSERTS

Other Names: Hydragrip

Use(s): This is a vascular clamp with soft jaws for vessels as well as graft material.

Description: These clamps can be angled and straight. The inserts come in a pair with one as a hydrajaw and one as a traction jaw.

Instrument Insight: These clamps are used in vascular, pulmonary, cardiac, and gastrointestinal procedures.



Instrument: DEBAKEY AORTIC CLAMP

Use(s): This is a multiple-use clamp. It can be used for partial occlusion or total occlusion. It is also used to tunnel under the

tissues to pull a graft through to its distal anastomosis.

Description: This clamp has curved shanks with DeBakey design serrations in the jaws.



Instrument: DEBAKEY PERIPHERAL VASCULAR CLAMP

Other Names: Angled or sometimes referred to by degree such as a 35 or a 45.

Use(s): This is a total occlusion clamp.

Description: A ratcheted clamp with straight, curved, or various angled jaws that have DeBakey style serrations.

Instrument Insight: Ratchet handles allow the surgeon to adjust the clamp according to the blood pressure inside the vessel. They also allow gradual increase or decrease of blood flow.



Instrument: LAMBERT-KAY AORTA CLAMP

Other Names: Side biter

Use(s): This is a partial occlusion clamp.

Description: This clamp has DeBakey design serrations in the jaws.

Instrument Insight: This is often used to partially occlude the aorta for proximal end anastomosis of saphenous vein grafts in coronary artery bypasses.



Instrument: DEBAKEY COARCTATION CLAMP

Other Names: Patent ductus

Use(s): This clamp is used on the iliac and femoral arteries during abdominal aortic aneurysm (AAA) repair.

Description: This clamp is slightly angled. The jaw has DeBakey design serrations.

Instrument Insight: This clamp is often used to occlude more than one vessel at a time such as the femoral and profunda femoris arteries.



Instrument: DEBAKEY SIDEWINDER AORTA CLAMP

Other Names: Subramanian

Use(s): This is an aortic occlusion clamp.

Description: The clamp is angled and the jaws are curved.

Instrument Insight: This clamp is often used on the aorta during AAA repair when there is limited room for a cross-clamp.

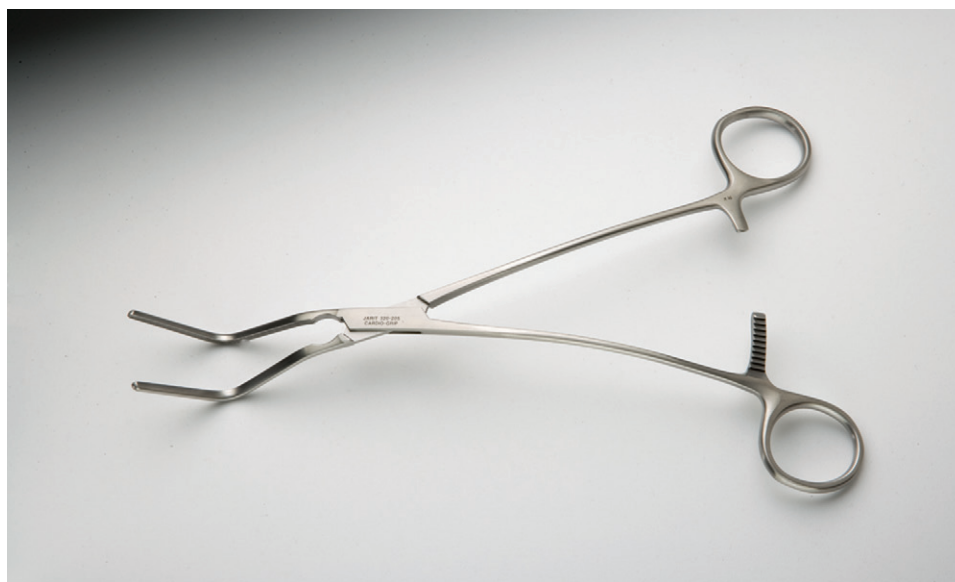


Instrument: COOLEY COARCTATION CLAMP

Other Names: Straight clamp

Use(s): This is often used when clamping deep anatomical vessels.

Description: A total occlusion clamp that has straight, cardio-grip jaws.



Instrument: LEE BRONCHUS CLAMP

Use(s): This is a clamp used for total occlusion of the bronchus during lung procedures.

Description: This clamp has 90°-angle tips.

Instrument Insight: This instrument is often used for occlusion of structures during lung procedures.

CUTTING AND DISSECTING INSTRUMENTS



Instrument: DIETRICH SCISSORS

Other Names: Ducks scissors

Use(s): These scissors are used to extend an opening in an artery or vein.

Description: These scissors vary in degrees of angles; they have a stabilizing bar on the handles, and the blades have a sharp point.

Instrument Insight: These are considered a delicate instrument and should never be used for anything except opening of a vessel. Wipe clean after each use with a damp sponge.



Instrument: POTTS-SMITH SCISSORS

Other Names: Potts

Use(s): These scissors are used to extend an opening in an artery or vein.

Description: These scissors come in a variety of degrees of angles. They are heavier than

Diethrich scissors yet are still considered a delicate instrument.

Instrument Insight: These scissors are to be used on vessels only. They are heavier and can cut through calcified plaque.

**Instrument: JAMISON SCISSORS**

Other Names: Tenotomy

Use(s): These scissors are used to dissect plaque out of an artery and to cut arterial branches when taking the mammary down. They are fine dissection scissors.

Description: These are fine scissors with sharp points and curved blades. They are available in a variety of lengths.

Instrument Insight: These delicate scissors should not be used to cut suture. The tips should be protected while sterilizing and packaging.

**Instrument: REYNOLDS SCISSORS**

Other Names: Jameson

Use(s): These are fine dissection scissors and are often used to bevel the vein when making an anastomosis.

Description: These scissors are available in a variety of lengths.

Instrument Insight: Jameson, Reynolds, and tenotomy scissors are often indiscernible. Reynolds scissors are delicate scissors and should be wiped clean after each use with a damp sponge. The tips should also be protected during sterilization and packaging.

**Instrument: YASARGIL SCISSORS**

Other Names: Yasar scissors

Use(s): These scissors are used to extend an arteriotomy, usually in deep or hard to reach vessels such as a circumflex coronary artery.

Description: These are delicate, bayonet, spring-handled scissors.

Instrument Insight: These delicate scissors should be cleaned after each use with a damp sponge, and the tips should be protected during sterilization and packaging.

**Instrument: COOLEY SCISSORS**

Use(s): These are versatile scissors with many uses. They dissect tissue, cut suture, and can be used to cut grafts.

Description: These scissors have curved Mayo-type blades.



Instrument: LEBSCHE KNIFE

Other Names: Sternal knife

Use(s): Used for opening the sternum lengthwise.

Description: This is a heavy instrument with a flat, smooth distal end to protect the

pericardium. The blade sits just above the flat end.

Instrument Insight: This is only used when a power saw is unavailable or during a power outage. Use it with a mallet.



Instrument: FARABEUF RASP

Other Names: Alexander

Use(s): Used for scraping periosteum from rib bone.

Description: This is a heavy double-ended instrument with a blade. One end is curved and the other is straight.

Instrument Insight: Care should be taken to protect the edges of the blades against chipping or gouging.

**Instrument: GLUCK RIB SHEAR****Other Names:** Rib cutter**Use(s):** Used for resecting ribs.**Description:** This is a heavy shear. The outside blade encircles the rib and the inside blade cuts down.**Instrument Insight:** Patient anatomy as well as what rib is being excised dictates which rib cutter is preferred.**Instrument: STILLE-GIERTZ RIB SHEAR****Other Names:** Shoemaker**Use(s):** Used for resecting ribs.**Description:** This shear is heavy. The distal end encircles the rib, and squeezing the handle brings the blade down, much like a guillotine, to

cut the rib. The double-action handle allows for a more powerful cutting action.

Instrument Insight: Patient anatomy as well as what rib is being excised dictates which rib shear is preferred. Inspect the blade for nicks or gouges before use.



Instrument: SAUERBRUCH RIB RONGEUR

Other Names: Rib cutter

Use(s): Used for resecting a ribs.

Description: This rib shear is heavy. The working element encircles the rib, and squeezing the handles slides a blade out to cut the rib.

Instrument Insight: Patient anatomy, rib location, and doctor's preference dictate what rib shear is used. Inspect the blade for nicks or gouges before use.



Instrument: LILLY SCISSORS

Use(s): These scissors are used for dissection of soft tissues.

Description: These scissors have blunt, pointed, slightly curved blades.

Instrument Insight: These scissors are similar to Metzenbaum scissors.

**Instrument: STERNAL SAW**

Other Names: Sarns sternal saw

Use(s): This is used to open the sternum by sawing lengthwise.

Description: This is a reciprocating-action saw with a disposable blade.

Instrument Insight: This saw needs a nitrogen tank and a foot pedal. Depending on the doctor's preference, the blade is loaded with the teeth up when sawing from xiphoid to sternal notch and the teeth down when sawing from the sternal notch to the xiphoid.

**Instrument: DOYEN RIB RASPATORIES**

Other Names: Doyen elevator and stripper

Use(s): This pair of instruments is used to scrape periosteum from rib bones before cutting.

Description: A solid, tapering handle attached to a straight shaft that leads to an outward C-shaped

curve at the distal end. The inside of the C-shape is flattened and has sharp edges.

Instrument Insight: The distal end encircles the rib and slides the length of rib to be excised, stripping the periosteum from the bone. Both right and left raspatories are available.



Instrument: MATSON RIB STRIPPER AND ELEVATOR

Other Names: Stripper

Use(s): Used for scraping periosteum from rib bone before cutting with a shear.

Description: This is a double-ended instrument with a flattened, tear-shaped elevator on one end and a U-shaped, sharp rib stripper on the other.

Instrument Insight: Before use, inspect the ends for gouges or nicks.



Instrument: BETHUNE RIB SHEARS

Use(s): Used for resecting ribs.

Description: This heavy shear has straight cutting blades.

Instrument Insight: The long handles provide greater force when cutting bone.



Instrument: HEAVY WIRE CUTTER

Other Names: Pin cutter

Use(s): This wire cutter is used to cut sternal wires.

Description: This wire cutter has double-action, angled blade tips.

Instrument Insight: Double action provides extra strength.

GRASPING AND HOLDING INSTRUMENTS



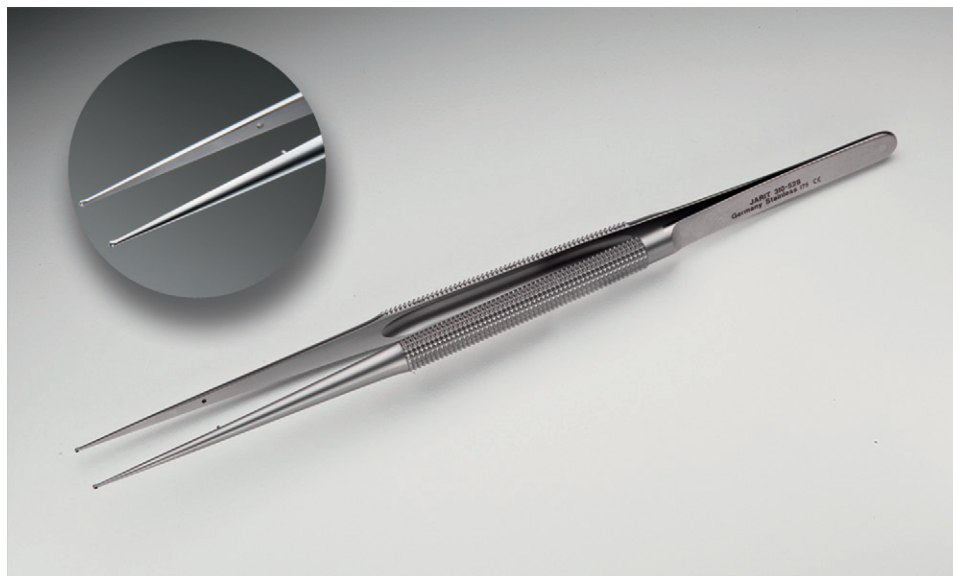
Instrument: SAROT BRONCHUS CLAMP

Use(s): During lung procedures, this clamp is used to hold and occlude the bronchus while stapling.

Description: These clamps come in a set of two: right and left, curved or angled. These have

longitudinal serrations with holes on one side of jaws and pegs on the opposite jaw to match up and hold the tissue stable.

Instrument Insight: Take care to not snag gloves on pegs.

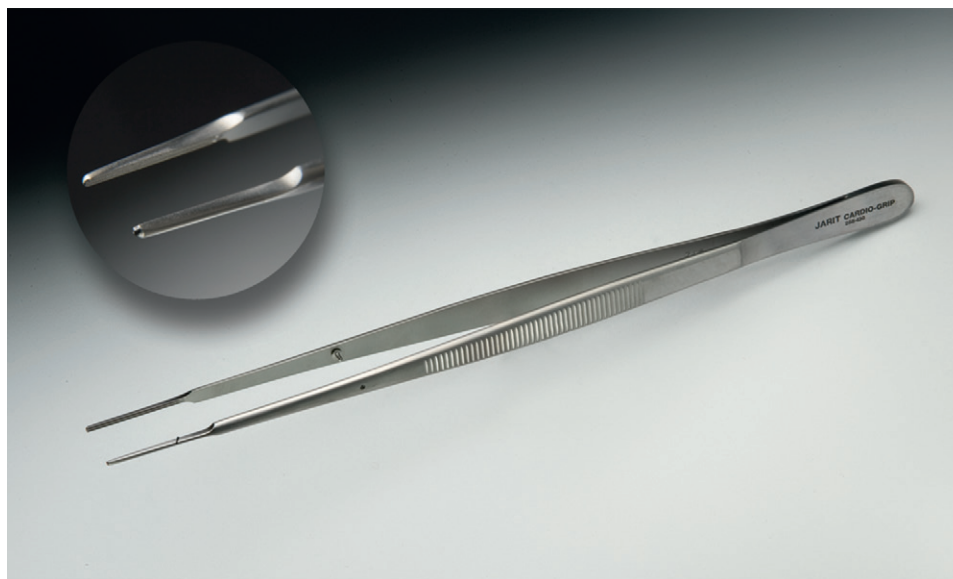


Instrument: MILLS/DENNIS MICRO RING TISSUE FORCEPS

Use(s): These forceps are used to take down the mammary from the chest wall and also to hold the mammary during anastomosis in bypass surgery.

Description: Very fine forceps with Barraquer-style handle and tiny ring tips with serrations.

Instrument Insight: These forceps are very fine with tiny serrations. The tips of these forceps should be protected during packaging and sterilization.



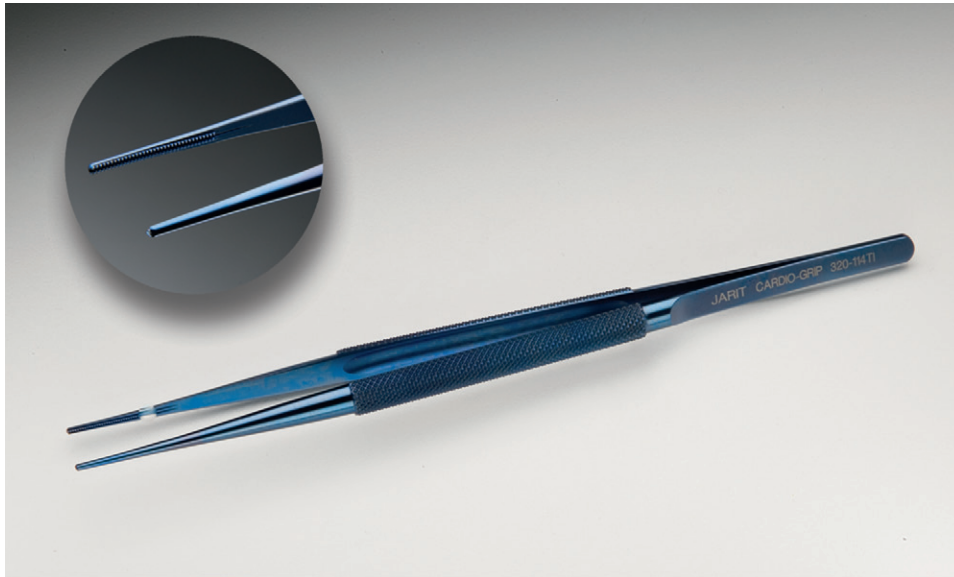
Instrument: GERALD TISSUE FORCEPS

Other Names: Mammary forceps

Use(s): Often used during a coronary artery bypass procedure to manipulate the vessel and tissues while taking down the mammary artery from the chest wall and to grasp the coronary artery and graft during the anastomosis.

Description: These forceps have very fine, narrowed tips with horizontal serrations.

Instrument Insight: These forceps are delicate and should be protected during sterilization and packaging. They are also used for opening the lumen of a vein and holding it open for suture placement.



Instrument: DEBAKEY-DIETRICH TISSUE FORCEPS

Other Names: Titaniums

Use(s): Used for holding the vein during bypass surgery.

Description: These fine forceps have Barraquer-style handles and noncrushing jaws of the DeBakey design.

Instrument Insight: These forceps are delicate, and tips should be protected during sterilization and packaging.



Instrument: POTTS-SMITH TISSUE FORCEPS

Other Names: Walters or goldies

Use(s): Used to hold and grasp tissue and vessels.

Description: These forceps have fine, serrated, carbide tips.

Instrument Insight: These are very sturdy forceps that are often used when the surgeon is suturing because the jaws do not bend or damage the needle.

**Instrument: DUVAL LUNG FORCEPS**

Other Names: Lung clamp

Use(s): Used to grasp and hold lung tissue.

Description: This is an angled or straight forceps with triangular, fenestrated tips that have horizontal serrations.

Instrument Insight: These clamps are used for lung tissue but can be used on other friable tissue as well.

**Instrument: DEBAKEY VASCULAR TISSUE FORCEPS**

Use(s): These forceps are used for holding and grasping tissue.

Description: They come in a variety of lengths, and the jaws are of the DeBakey design.

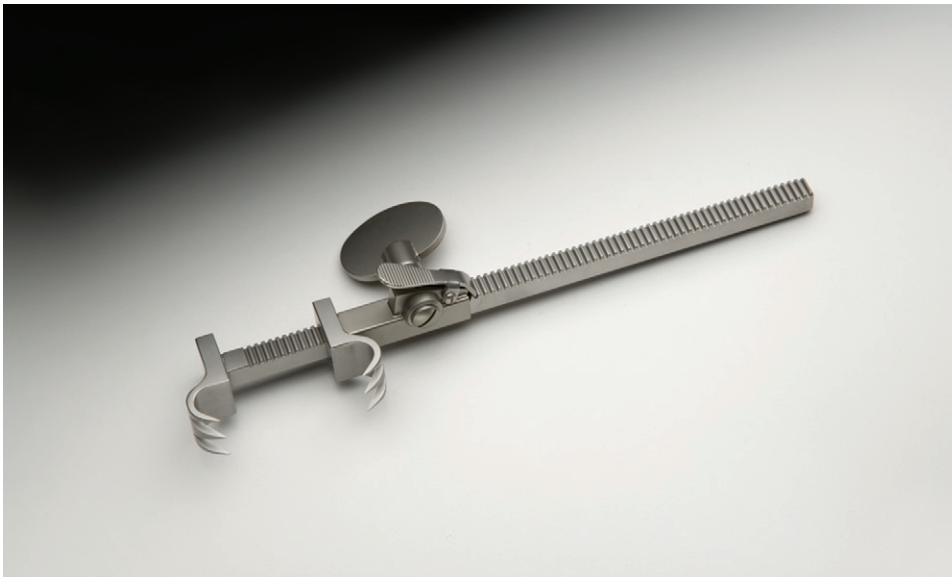
Instrument Insight: The 7-inch and 8-inch DeBakey forceps are the most commonly used tissue forceps and are often used in other specialties.

**Instrument:** CUSHING VEIN RETRACTOR

Use(s): Used for retracting vessels and tissues for exposure.

Description: This retractor has a plain, smooth, upward-curved end, and should be categorized as a retracting and exposing instrument.

Instrument Insight: Vein retractors should always be in your set.

**Instrument:** BAILEY RIB CONTRACTOR

Other Names: Rib approximator

Use(s): This instrument is used to approximate the ribs and hold them until sutures can be placed and secured after a thoracotomy.

Description: This instrument has claws facing each other on a serrated post and a "paw"

mechanism to tighten the claws, approximating the ribs.

Instrument Insight: When handling the Bailey, care must be taken; the jaws are sharp and may snag gloves, and it should be handed to the surgeon with the jaws closed.

PROBING AND DILATING INSTRUMENTS



Instrument: GARRETT VASCULAR DILATORS

Use(s): These are used to dilate vessels gradually.

Description: They come in a set of nine and have tips of varying sizes. This instrument has an oval, solid, stainless-steel tip that attaches to a

narrowed malleable stem, which extends to a solid, smooth handle.

Instrument Insight: The set comes in its own container or box to hold them in order of size. They are malleable but after a lot of use can actually break, so let the surgeon do the bending.

RETRACTING AND EXPOSING INSTRUMENTS



Instrument: ALLISON LUNG RETRACTOR

Other Names: Whisk

Use(s): This is used to retract lung tissue.

Description: A solid grip-handle that leads to multiple heavy wires that form a rounded spatula shape.

Instrument Insight: This retractor is not "pulled" but simply "held" in place.

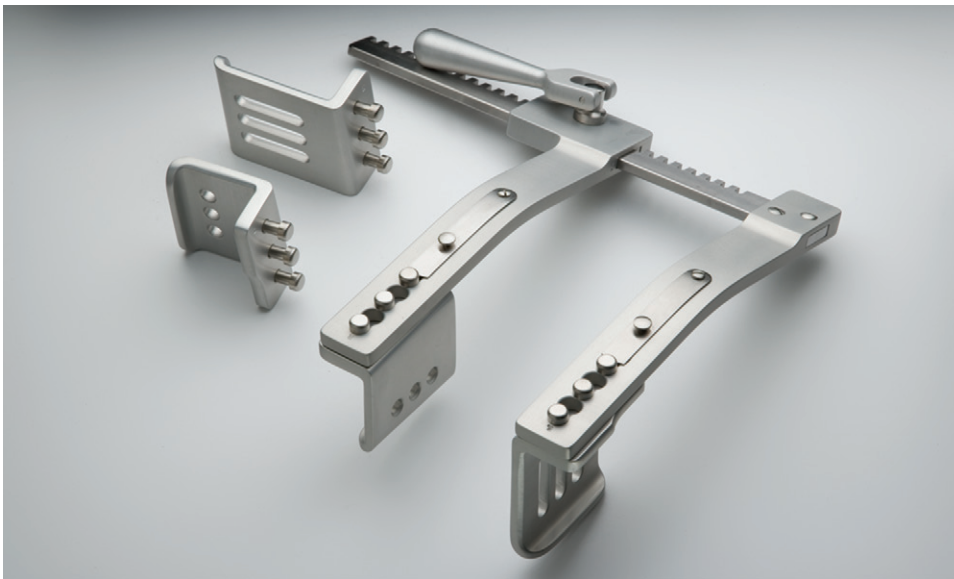
**Instrument: COOLEY ARTERIAL RETRACTOR**

Other Names: Mitral valve retractor

Use(s): Used to retract the atrium during mitral valve procedures.

Description: A solid octagonal handle that leads to a rod-like shaft that trifurcates to create a curved, open blade.

Instrument Insight: This retractor is seldom "pulled" but is placed and "held" in position.

**Instrument: BURFORD RIB SPREADER**

Other Names: Chest spreader, Buford-Finocchio

Use(s): This instrument is used to retract ribs for lung procedures and to spread the sternum in cardiac procedures.

Description: A crank-ratcheted, self-retaining frame with interchangeable blades that attach to the end of each arm.

Instrument Insight: This chest spreader is lightweight. Both the blades and the arms are marked "R" and "L" to aid in assembly.



Instrument: FINOCHIETTO RIB SPREADER

Other Names: Chest or rib spreader

Use(s): Used for spreading ribs for exposure of the chest cavity.

Description: This self-retaining retractor has curved and straight blade arms, and the blades do not detach.



Instrument: PARSONNET EPICARDIAL RETRACTOR

Use(s): This is used to expose coronary arteries in adipose tissue during bypass surgery.

Description: This is a tiny, very light, self-retaining retractor that fits between the finger tips to place.

Instrument Insight: This is a delicate instrument and should be sterilized and packaged with care and protection.

**Instrument: DAVIDSON SCAPULA RETRACTOR**

Use(s): Used for retracting the scapula to expose the ribs during thoracic entry and closure.

Description: A heavy retractor that resembles a spatula that is bent in the shape of an S.

Instrument Insight: This retractor is used for a short time during entry into the chest and sometimes during closure. It does not require pulling.

**Instrument: ANKNEY RETRACTOR**

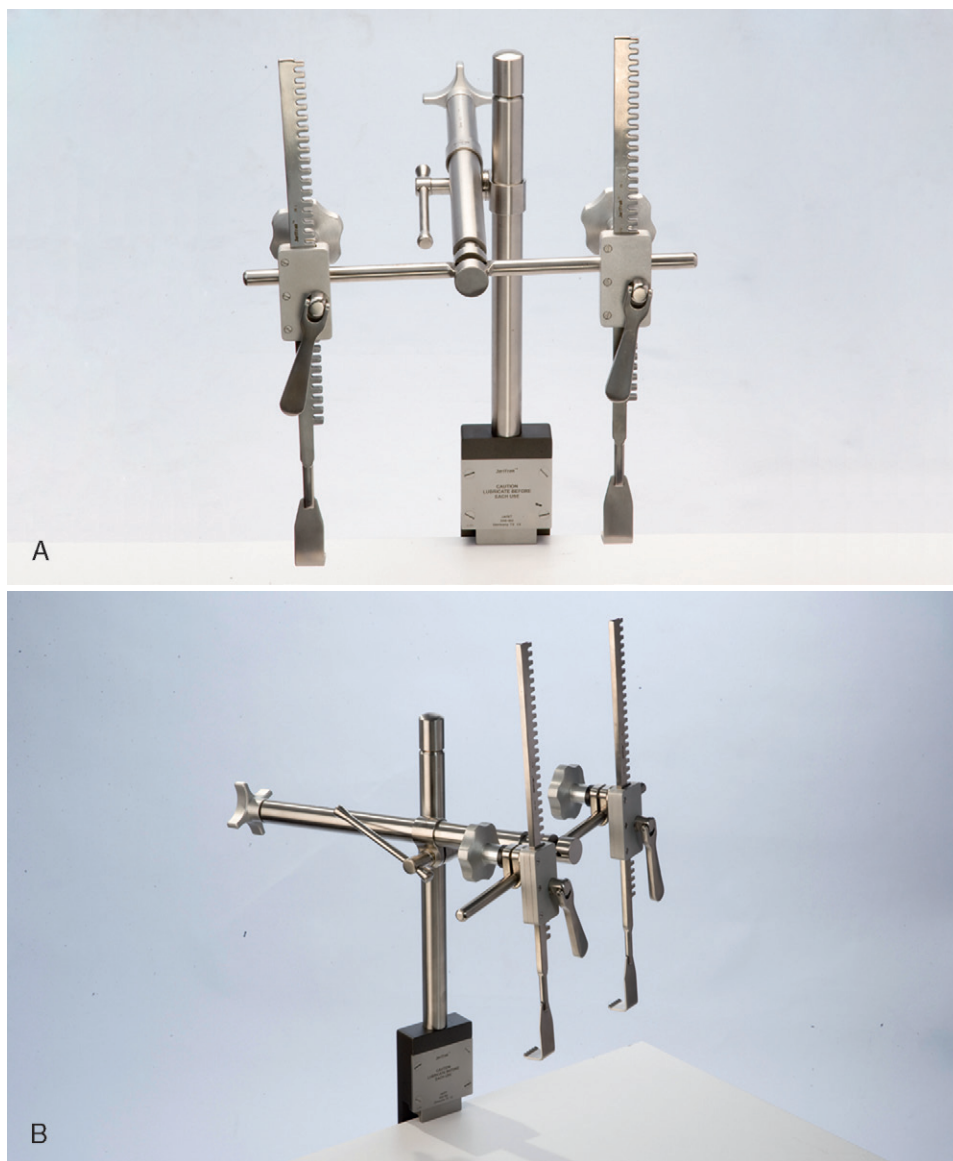
Other Names: Chest spreader

Use(s): Used to spread the sternum open following a sternotomy during cardiac procedures.

Description: This is a self-retaining retractor with six blades that each screw onto the arms of

the retractor. The blades come in two depth lengths.

Instrument Insight: Retractor should be closed completely when handing it to the surgeon.



Instrument: INTERNAL MAMMARY RETRACTOR

Other Names: Mammary retractor, Favaloro

Use(s): Used for lifting up one side of the chest wall after a sternotomy to facilitate internal mammary dissection.

Description: The support bar clamps to the side rail of the operating table. Rake retractors

are positioned on the sternum, and the ratchet assembly lifts the arms of rakes to the desired position or height the surgeon needs to take down the mammary.

Instrument Insight: An unsterile person clamps the support bar to the bed and unclamps it after mammary dissection.

SUCTIONING AND ASPIRATING INSTRUMENTS



Instrument: ANDREWS-PYNCHON SUCTION TIP

Other Names: CV suction tip, baby Yankauer

Use(s): Used for suctioning of fluids to aid in exposure.

Description: This is a suction tip with four tiny holes on the sides of the tip and one larger hole at the end.

Instrument Insight: This is often used as a retractor at the same time as suctioning. The tip is somewhat malleable.



Instrument: VASCULAR SUCTION TIP

Other Names: Cardiac suction

Use(s): This instrument is used to suction fluids to aid in exposure.

Description: This suction has a large hole at the distal end and smaller holes on the sides of the

tip. This also is manufactured as a single use disposable tip.

Instrument Insight: This suction may be a retractor at the same time it is being used for suctioning.

SUTURING AND STAPLING INSTRUMENTS

Instrument: NEEDLE HOLDER

Other Names: Fine Ryder needle holder

Use(s): Used for suturing of purse strings and valve sutures during heart surgery.

Description: Has finely tapered jaws with carbide inserts.

Instrument Insight: This is a fine but sturdy instrument. Wipe it clean every time when loading valve suture.



Instrument: STERNAL NEEDLE HOLDER AND WIRE TWISTER

Other Names: Big ugly

Use(s): Used for placement of sternal wires and as a wire twister.

Description: This needle holder type instrument has rounded, heavy jaws with carbide inserts to hold the needle.

Instrument Insight: Load heavy sternal wires at the center of the needle so the needle does not bend from the pressure of pushing it through hard bone.

**Instrument: COOLEY NEEDLE HOLDER**

Use(s): Used for placement of purse strings and valve sutures.

Description: This is a needle holder with carbide jaws and fine tips.

Instrument Insight: The carbide jaws hold the needles so there is no slippage while placing the sutures.

**Instrument: CASTROVIEJO NEEDLE HOLDER**

Other Names: Castro

Use(s): Used for anastomosis suturing.

Description: This needle holder comes in a variety of lengths. It has a flat, catch-spring handle.

Instrument Insight: This is a very delicate instrument and should be protected during sterilization and packaging. Use only 4-0 or smaller sutures with these needle holders.



Index

A

Abdominal sucker. *See* Poole suction tip

Abdominal wall retractor. *See* Mayo abdominal retractor

ACF retractor, 286–287, 286f
description of, 286
uses of, 286

Adson cranial rongeur, 263–264, 263f
description of, 263
insight on, 263
uses of, 263

Adson dressing forceps. *See* Adson tissue forceps, plain

Adson forceps, 10, 10f. *See* Adson tonsil/Schmidt forceps
description of, 10
other names for, 10
uses of, 10

Adson hook, sharp, 280, 280f
description of, 280
insight on, 280
uses of, 280

Adson hypophyseal cup tissue forceps, 276, 276f
description of, 276
insight on, 276
other names for, 276
uses of, 276

Adson periosteal elevator, 272, 272f
description of, 272
other names for, 272
uses of, 272

Adson tissue forceps, plain, 18–19, 18f
description of, 18
insight on, 18
other names for, 18
uses of, 18

Adson tissue forceps, toothed, 19, 19f
description of, 19
insight on, 19
other names for, 19
uses of, 19

Adson tonsil/Schmidt forceps, 143, 143f
description of, 143
other names for, 143
uses of, 143

Adson with teeth forceps. *See* Adson tissue forceps, toothed

Alexander rasp. *See* Farabeuf rasp

Alligator forceps. *See* Wullstein ear forceps

Allis, big. *See* Allis-Adair

Allis-Adair, 90–91, 90f
description of, 90
insight on, 90
other names for, 90
uses of, 90

Allis forceps, 24, 24f
description of, 24
uses of, 24

Allis forceps, curved, 173–174, 173f
description of, 173
insight on, 173
other names for, 173
uses of, 173

Allis forceps, endoscopic, 62, 62f
description of, 62
uses of, 62

Allison lung retractor, 315–316, 315f
description of, 315
insight on, 315
other names for, 315
uses of, 315

Alm retractor, 244, 244f
description of, 244
uses of, 244

Andrews-Pynchon suction tip, 320, 320f
description of, 320
insight on, 320
other names for, 320
uses of, 320

Andrew's tongue depressor, 196, 196f
categories of, 196
description of, 196
other names for, 196
uses of, 196

Aneurysm clip applier and clips, 259, 259f
cautions when using, 259–260
description of, 259
insight on, 259
uses of, 259

Angle pick. *See* Root tip pick

Ankeney retractor, 318–319, 318f
description of, 318
insight on, 318
other names for, 318
uses of, 318

Anti-fog solution, 48–49, 48f
description of, 48
insight on, 48
other names for, 48
uses of, 48

Antrum rasp. *See* Wiener antrum rasp

Apical elevator, 188, 188f
description of, 188
insight on, 188
other names for, 188
uses of, 188

Apple needle holder, 69, 69f
description of, 69
insight on, 69
uses of, 69

Arch bars, 186, 186f
description of, 186
insight on, 186
uses of, 186

Areola marker, 197–198, 197f
description of, 197
insight on, 197
other names for, 197
uses of, 197

Army-Navy retractor, 25–26, 25f
description of, 25
insight on, 25
other names for, 25
uses of, 25

Army's retractor. *See* Army-Navy retractor

Arterial retractor, 79, 79f
description of, 79
insight on, 79
other names for, 79
uses of, 79

Arthroscope. *See* 25° 4-MM lens

Atraumatic towel clamp. *See* Towel clip (nonpenetrating)

Aufricht nasal rasps, 157, 157f
description of, 157
insight on, 157
uses of, 157

Aufricht nasal retractor, 178–179, 178f
description of, 178
uses of, 178

Auvard weighted vaginal speculum, 95–96, 95f
description of, 95
insight on, 95
other names for, 95
uses of, 95

B

B. B. forceps. *See* Cushing bipolar forceps

Babcock forceps, 24–25, 24f
description of, 24
uses of, 24

- Babcock forceps, endoscopic, 62–63, 62f
description of, 62
uses of, 62
- Baby ribbons. *See* Davis brain spatulas
- Baby sucker. *See* Bulb syringe
- Backhaus towel clip. *See* Towel clip (penetrating)
- Bacon cranial rongeur, 262–263, 262f
description of, 262
insight on, 262
uses of, 262
- Bailey rib contractor, 314, 314f
description of, 314
insight on, 314
other names for, 314
uses of, 314
- Bakes common duct dilators, 40, 40f
description of, 40
insight on, 40
other names for, 40
uses of, 40
- Balfour retractor, 43–44, 43f
description of, 43
insight on, 43
other names for, 43
uses of, 43
- Ballenger swivel knife, 159–160, 159f
description of, 159
other names for, 159
uses of, 159
- Ballenger v-shaped osteotome, 164–165, 164f
description of, 164
insight on, 164
uses of, 164
- Ball loop electrode, 105, 105f
description of, 105
insight on, 105
uses of, 105
- Balloon dilator, 112, 112f
description of, 112
insight on, 112
uses for, 112
- Ball tip probe, 277, 277f
description of, 277
uses of, 277
- Bandage scissors. *See* Lister bandage scissors; Utility scissors
- Barbara needle. *See* House-Barbara shattering needle
- Barnhill adenoid curettes, 169, 169f
description of, 169
insight on, 169
uses of, 169
- Baron suction tips, 182–183, 182f
description of, 182
insight on, 182
other names for, 182
uses of, 182
- Barraquer eye speculum, 134, 134f
description of, 134
other names for, 134
uses of, 134
- Barraquer iris scissors, 125, 125f
description of, 125
insight on, 125
uses of, 125
- Barraquer iris spatula, 122, 122f
description of, 122
- Barraquer iris spatula (*Continued*)
other names for, 122
uses of, 122
- Barraquer needle holder, 138, 138f
description of, 138
uses of, 138
- Baskin Robin. *See* Adson hypophyseal cup tissue forceps
- Bayonet. *See* Jansen tissue forceps
- Bean rongeur. *See* Cushing pituitary rongeur
- Beaver handle, 18, 18f
description of, 18
insight on, 18
other names for, 18
uses of, 18
- Beck aortic clamp, 297, 297f
description of, 297
other names for, 297
uses of, 297
- Becker septum scissors, 155–156, 155f
description of, 155
uses of, 155
- Beckman retractor, 238, 238f, 282, 282f
cautions when using, 238, 282
description of, 238, 282
insight on, 238, 282
uses of, 238, 282
- Bellucci scissors, 146–147, 146f
description of, 146
insight on, 146
other names for, 146
uses of, 146
- Bennett retractor, 237, 237f
description of, 237
insight on, 237
uses of, 237
- Bethune rib shears, 309–310, 309f
description of, 309
insight on, 309
uses of, 309
- Beyer rongeur, 263, 263f
description of, 263
insight on, 263
uses of, 263
- Bifurcated prostate retractor. *See* Young bifurcated retractor
- Big ugly. *See* Sternal needle holder and wire twister
- Big Ugly's forceps. *See* Ferris-Smith tissue forceps
- Billeau ear loop, 143, 144f
description of, 143
insight on, 143
other names for, 143
uses of, 143
- Biopsy forceps, 109, 109f. *See also* Hysteroscope biopsy forceps
description of, 109
insight on, 109
uses of, 109
- Bipolar bayonet forceps. *See* Cushing bipolar forceps
- Bipolar forceps. *See* Maryland bipolar forceps
- Bishop-Harmon iris tissue forceps, 132, 132f
description of, 132
uses of, 132
- Bit block. *See* Mouth prop
- Biter. *See* Cobra grasper
- Bit wedge. *See* Mouth prop
- Bivalve speculum. *See* Graves vaginal speculum
- Blount knee retractor, 243, 243f
description of, 243
insight on, 243
uses of, 243
- Blunt curette. *See* Thomas uterine curette
- Blunt dissector, 55, 55f
description of, 55
insight on, 55
uses of, 55
- Blunt grasper, 63, 63f
description of, 63
uses of, 63
- Blunt hook, 292, 292f
description of, 292
insight on, 292
other names for, 292
uses of, 292
- Blunt tip trocar. *See* Blunt trocar
- Blunt trocar, 65, 65f
description of, 65
insight on, 65
other names for, 65
uses of, 65
- Boettcher tonsil scissors, 168, 168f
description of, 168
insight on, 168
other names for, 168
uses of, 168
- Bolt cutter. *See* Large pin cutter
- Bone cement gun, 213, 213f
description of, 213
insight on, 213
other names for, 213
uses of, 213
- Bone cement system, 213, 213f
cautions when using, 213–214
insight on, 213
uses of, 213
- Bone file, 223, 223f
description of, 223
insight on, 223
other names for, 223
uses of, 223
- Bone hook, 239, 239f
cautions when using, 239
description of, 239
insight on, 239
uses of, 239
- Bone skid. *See* Lever skid humeral head retractor
- Bone tamp, 198, 199f
description of, 212
insight on, 212
other names for, 212
uses of, 212
- Bookwalter, 44, 44f
description of, 44
insight on, 44
other names for, 44
uses of, 44
- Boucheron ear speculum, 183–184, 183f
description of, 183
insight on, 183
uses of, 183

Bovie pencil. *See* Electrosurgical pencil
 Bovie spatula. *See* Permanent cautery spatula
 Bowman lacrimal probe, 133, 133f
 description of, 133
 insight on, 133
 other names for, 133
 uses of, 133
 Box curette. *See* Kevorkian endocervical curette
 Bozeman uterine dressing forceps, 91–92, 91f
 description of, 91
 other names for, 91
 uses of, 91
 Braun tenaculum. *See* Schroeder tenaculum
 Breast hook. *See* Mammoplasty hook
 Bridge. *See* Telescope bridge
 Briggs mammoplasty retractor, 208, 208f
 description of, 208
 uses of, 208
 Brown-Adson tissue forceps, 19, 19f
 description of, 19
 other names for, 19
 uses of, 19
 Browne deltoid retractor, 246–247, 246f
 description of, 246
 uses of, 246
 Brown forceps. *See* Brown-Adson tissue forceps
 Bruening septum forceps, 172, 172f
 description of, 172
 uses of, 172
 Brun curettes. *See* Spinal curettes
 Bruns oval bone curettes, 230, 230f
 description of, 230
 other names for, 230
 uses of, 230
 Buck ear curette, 151–152, 151f
 description of, 151
 other names for, 151
 uses of, 151
 Buford-Finocchio. *See* Burford rib spreader
 Bugbee electrode, 105–106, 105f
 description of, 105
 insight on, 105
 uses of, 105
 Bulb retractor. *See* Young bulb retractor
 Bulb syringe, 98–99, 98f
 description of, 98
 insight on, 98
 other names for, 98
 uses of, 98
 Bulldog. *See* DeBakey bulldog
 Bullet nose dissector. *See* Cone tip dissector
 Burford rib spreader, 316–317, 316f
 description of, 316
 insight on, 316
 other names for, 316
 uses of, 316

C

Caliper. *See* Townley caliper
 Canal elevator. *See* House elevator
 Canal knife. *See* House joint knife;
 House-sheehy knife curette

Cannulated pin cutter, 228–229, 228f
 description of, 228
 insight on, 228
 other names for, 228
 uses of, 228
 Caplan scissors, 154–155, 154f
 description of, 154
 uses of, 154
 Capsule retractor, 246, 246f
 description of, 246
 other names for, 246
 uses of, 246
 Cardiac suction. *See* Vascular suction tip
 Carmalt forceps, 9–10, 9f
 big curved (*See* Carmalt forceps)
 description of, 9
 other names for, 9
 uses of, 9
 Carter-Glassman intestinal clamp, 36, 36f
 description of, 36
 other names for, 36
 uses of, 36
 Castro. *See* Castroviejo corneal scissors; Castroviejo needle holder
 Castroviejo caliper, 121, 121f
 description of, 121
 uses of, 121
 Castroviejo corneal scissors, 125, 125–126
 description of, 125
 other names for, 125
 uses of, 125
 Castroviejo eye speculum, 134–135, 134f
 description of, 134
 uses of, 134
 Castroviejo needle holder, 137, 137f, 322, 322f
 description of, 137, 322
 insight on, 322
 other names for, 322
 uses of, 137, 322
 Castroviejo suturing tissue forceps 0.12 MM, 0.5 MM, 131, 131f
 description of, 131
 insight on, 131
 uses of, 131
 Cath element. *See* Catheter deflecting element
 Catheter deflecting element, 103–104, 103f
 description of, 103
 insight on, 103
 other names for, 103
 uses of, 103
 Cat paw. *See* Mathieu retractor
 Cat paw retractor. *See* Senn retractor
 Cautery pencil. *See* Electrosurgical pencil
 Cautery spatula. *See* Permanent cautery spatula
 Cawood retractor. *See* Minnesota cheek retractor
 CEEA stapler. *See* Intraluminal stapler
 Cement gun. *See* Bone cement gun
 Cerebellar retractor, 282, 282f
 cautions when using, 282–283
 description of, 282
 insight on, 282
 uses of, 282

Cervical dilators. *See* Hank dilators; Hegar dilators; Pratt uterine dilators
 Chandler elevator. *See* Chandler retractor
 Chandler retractor, 239–240, 239f
 description of, 239
 insight on, 239
 other names for, 239
 uses of, 239
 Channel locks. *See* Pliers
 Cheek retractor. *See* Minnesota cheek retractor
 Chest spreader. *See* Ankeney retractor; Burford rib spreader; Finocchio rib spreader
 Chuck and key, 217–218, 217f
 description of, 217
 other names for, 217
 uses of, 217
 Cicherelli mastoid rongeur, 149–150, 149f
 description of, 149
 insight on, 149
 other names for, 149
 uses of, 149
 Cinelli guarded osteotome, 167–168, 167f
 description of, 167
 insight on, 167
 uses of, 167
 Circular stapler. *See* Intraluminal stapler
 Clamp. *See* Crile forceps; Kelly forceps angled (*See* Cooley clamp; DeBakey peripheral vascular clamp)
 Claw grasper, 63, 63f
 cautions when using, 63–64
 description of, 63
 insight on, 63
 other names for, 63
 uses of, 63
 Clayman lens forceps. *See* Lens insertion forceps
 Clip applier. *See* Endo clip applier; Hemoclip applier
 Cloward cervical retractor, 287–288, 287f
 description of, 287
 uses of, 287
 Cloward vertebra spreader, 287, 287f
 description of, 287
 uses of, 287
 Coag scissors. *See* Endoscopic scissors
 Coakley antrum curettes, 163–164, 163f
 description of, 163
 other names for, 163
 uses of, 163
 Cobb curettes, 271, 271f
 description of, 271
 uses of, 271
 Cobb elevators, 270–271, 270f
 description of, 270
 insight on, 270
 uses of, 270
 Cobb ring curettes, 271–272, 271f
 description of, 271
 uses of, 271
 Coblation wand, 142, 142f
 description of, 142
 insight on, 142
 uses of, 142

- Cobra. *See* Cobra grasper
 Cobra grasper, 77–78, 77f
 description of, 77
 other names for, 77
 uses of, 77
 Cobra retractor, 242–243, 242f
 description of, 242
 insight on, 242
 uses of, 242
 Cold cone knife. *See* Long angled #3 knife handle
 Colibri tissue forceps, 130–131, 130f
 description of, 130
 insight on, 130
 uses of, 130
 Columella retractor. *See* Cottle columella forceps
 Common duct dilators. *See* Bakes common duct dilators
 Cone tip dissector, 56, 56f
 description of, 56
 insight on, 56
 other names for, 56
 uses of, 56
 Cookie cutter. *See* Areola marker
 Cooley arterial retractor, 316, 316f
 description of, 316
 insight on, 316
 other names for, 316
 uses of, 316
 Cooley clamp, 295–296, 295f
 description of, 295
 insight on, 295
 other names for, 295
 uses of, 295
 Cooley coarctation clamp, 301, 301f
 description of, 301
 other names for, 301
 uses of, 301
 Cooley needle holder, 322, 322f
 description of, 322
 insight on, 322
 uses of, 322
 Cooley scissors, 304–305, 304f
 description of, 304
 uses of, 304
 Cord clamp, 83, 83f
 description of, 83
 insight on, 83
 uses of, 83
 Cottle angular scissors, 155, 155f
 description of, 155
 insight on, 155
 other names for, 155
 uses of, 155
 Cottle bone crusher, 140–141, 140f
 description of, 140
 insight on, 140
 uses of, 140
 Cottle chisels, 167, 167f
 description of, 167
 insight on, 167
 other names for, 167
 uses of, 167
 Cottle columella forceps, 175, 175f
 description of, 175
 insight on, 175
 other names for, 175
 uses of, 175
 Cottle double hook retractor, 177–178, 177f
 description of, 177
 insight on, 177
 uses of, 177
 Cottle knife guide and retractor, 177, 177f
 description of, 177
 uses of, 177
 Cottle mallet, 141, 141f
 description of, 141
 insight on, 141
 other names for, 141
 uses of, 141
 Cottle nasal knife, 162, 162f
 description of, 162
 insight on, 162
 uses of, 162
 Cottle nasal speculum, 175–176, 175f
 description of, 175
 uses of, 175
 Cottle osteotomes, 166–167, 166f
 description of, 166
 insight on, 166
 uses of, 166
 Cottle septal elevator, 162–163, 162f
 description of, 162
 insight on, 162
 uses of, 162
 Cottle tenaculum, double, 205, 205f
 cautions when using, 205–206
 description of, 205
 insight on, 205
 other names for, 205
 uses of, 205
 Cottle tenaculum, single, 205, 205f
 cautions when using, 205
 description of, 205
 insight on, 205
 uses of, 205
 Crabtree dissector, 153–154, 153f
 description of, 153
 insight on, 153
 other names for, 153
 uses of, 153
 Crane elevator, 187, 187f
 description of, 187
 other names for, 187
 uses of, 187
 Crego elevator, 225, 225f
 description of, 225
 insight on, 225
 uses of, 225
 Cricket retractor. *See* Jarit cross action retractor
 Crile forceps, 7–8, 7f. *See also* Kelly forceps
 description of, 7
 insight on, 7
 other names for, 7
 uses of, 7
 Crile-Wood needle holder, 32, 32f
 description of, 32
 other names for, 32
 uses of, 32
 Crimper. *See* McGee wire crimping forceps
 Cryer elevator, 187–188, 187f
 description of, 187
 insight on, 187
 Cryer elevator (*Continued*)
 other names for, 187
 uses of, 187
 Cryer forceps. *See* Lower anterior extraction forceps (151); Upper anterior extraction forceps (150)
 Cup forceps. *See* Adson hypophyseal cup tissue forceps
 Curettes. *See* Bruns oval bone curettes angled (*See* Lucas bone curette)
 Curved needle holder. *See* Heaney needle holder
 Curved scissors, 76, 76f
 description of, 76
 other names for, 76
 uses of, 76
 Cushing bayonet tissue forceps, 277, 277f
 description of, 277
 insight on, 277
 uses of, 277
 Cushing bipolar forceps, 260, 260f
 description of, 260
 insight on, 260
 other names for, 260
 uses of, 260
 Cushing pituitary rongeur, 265, 265f
 description of, 265
 insight on, 265
 uses of, 265
 Cushing rongeur, 231–232, 231f
 description of, 231
 insight on, 231
 uses of, 231
 Cushing vein contractor, 314, 314f
 description of, 314
 insight on, 314
 uses of, 314
 CV suction tip. *See* Andrews-Pyncheon suction tip
 Cystoscope sheath and obturator, 116, 116f
 description of, 116
 insight on, 116
 uses of, 116

D

- Dandy clamp. *See* Dandy hemostatic forceps
 Dandy hemostatic forceps, 261, 261f
 description of, 261
 other names for, 261
 uses of, 261
 Dandy nerve hook, 280–281, 280f
 description of, 280
 uses of, 280
 Davidson scapula retractor, 318, 318f
 description of, 318
 insight on, 318
 uses of, 318
 Davis brain spatulas, 278, 278f
 description of, 278
 insight on, 278
 other names for, 278
 uses of, 278
 Davis scalp retractor, 285, 285f
 description of, 285
 uses of, 285

- Dean rongeur, 144, 144f
description of, 144
insight on, 144
uses of, 144
- Dean scissors, 191, 191f
description of, 191
insight on, 191
other names for, 191
uses of, 191
- Deaver, small. *See* Deaver retractor, baby
- Deaver retractor, 42, 42f
description of, 42
insight on, 42
uses of, 42
- Deaver retractor, baby, 98, 98f
description of, 98
other names for, 98
uses of, 98
- DeBakes forceps. *See* DeBakey tissue forceps
- DeBakey aortic clamp, 298–299, 298f
description of, 298
uses of, 298
- DeBakey bulldog, 293–294, 293f
description of, 293
insight on, 293
other names for, 293
uses of, 293
- DeBakey coarctation clamp, 300, 300f
description of, 300
insight on, 300
other names for, 300
uses of, 300
- DeBakey-Dietrich tissue forceps, 312, 312f
description of, 312
insight on, 312
other names for, 312
uses of, 312
- DeBakey forceps, 78, 78f. *See also* DeBakey tissue forceps
description of, 78
insight on, 78
uses of, 78
- DeBakey forceps, endoscopic, 61–62, 61f
description of, 61
uses of, 61
- DeBakey peripheral vascular clamp, 299, 299f
description of, 299
insight on, 299
other names for, 299
uses of, 299
- DeBakey sidewinder aorta clamp, 300–301, 300f
description of, 300
insight on, 300
other names for, 300
uses of, 300
- DeBakey tissue forceps, 21, 21f
description of, 21
insight on, 21
other names for, 21
uses of, 21
- DeBakey vascular tissue clamp, 313–314, 313f
description of, 313
insight on, 313
uses of, 313
- Deflecting bridge. *See* Catheter deflecting element
- Delee suction, 99, 99f
cautions when using, 99
description of, 99
insight on, 99
other names for, 99
uses of, 99
- Delicate grasper. *See* Prograsp forceps
- Dental mirror. *See* Mouth mirror
- Dental pick. *See* Root tip pick
- Depth gauge, 210–211, 210f. *See also* Sims uterine sound
description of, 210
insight on, 210
other names for, 210
uses of, 210
- Dermamasher, 198–199, 198f
description of, 198
insight on, 198
other names for, 198
uses of, 198
- Dermatome, 199, 199f
caution when using, 199
description of, 199
insight on, 199
other names for, 199
uses of, 199
- Dermatome blade, 199, 199f
cautions when using, 199–200
description of, 199
insight on, 199
other names for, 199
uses of, 199
- Desjardin gallstone forceps, 39, 39f
description of, 39
other names for, 39
uses of, 39
- Desmarres chalazion clamp, 129, 129f
description of, 129
insight on, 129
other names for, 129
uses of, 129
- Desmarres lid retractor, 135–136, 135f
description of, 135
uses of, 135
- Diamond-flex retractor. *See* Endoflex retractor
- Diamond pin cutter, 229, 229f
description of, 229
insight on, 229
other names for, 229
uses of, 229
- Diathermy pencil. *See* Electrosurgical pencil
- Dietrich bulldog, 294, 294f
description of, 294
insight on, 294
uses of, 294
- Dietrich scissors, 302, 302f
description of, 302
insight on, 302
other names for, 302
uses of, 302
- Dissector. *See* Endo kittner
- Ditto. *See* House strut hook
- Dr. Fog. *See* Anti-fog solution
- Dolphin nose dissector, 55–56, 55f
description of, 55
insight on, 55
uses of, 55
- Doyen clamp. *See* Doyen intestinal clamp
- Doyen elevator and stripper. *See* Doyen rib raspatories
- Doyen intestinal clamp, 36–37, 36f
description of, 36
insight on, 36
other names for, 36
uses of, 36
- Doyen rib raspatories, 308–309, 308f
description of, 308
insight on, 308
other names for, 308
uses of, 308
- Dressing forceps. *See* Bozeman uterine dressing forceps
- Drill bit set, 221f, 234
description of, 221
other names for, 221
uses of, 221
- Drill box. *See* Drill bit set
- Drill chuck. *See* Chuck and key
- Duckbill right and left biter, 232, 232f
description of, 232
insight on, 232
uses of, 232
- Duckbill speculum. *See* Graves vaginal speculum
- Duckbill straight biter, 232–233, 232f
description of, 232
uses of, 232
- Duck scissors. *See* Dietrich scissors
- Duct probes. *See* Bowman lacrimal probe
- Dura hook, 279, 279f
description of, 279
insight on, 279
uses of, 279
- Dura scissors, angled. *See* Taylor dural scissors
- Duval forceps. *See* Pennington forceps
- Duval lung forceps, 313, 313f
description of, 313
insight on, 313
other names for, 313
uses of, 313

E

- Ear cup forceps. *See* Oval cup forceps, straight, right, left
- Ear curette. *See* Billeau ear loop; House double-ended curettes; Spratt mastoid curettes
- Ear knife. *See* House sickle knife; Myringotomy knife
- Ear suction. *See* Baron suction tips
- Ear syringe. *See* Bulb syringe
- Eastman retractor, 97–98, 97f. *See also* Richardson-Eastman retractor
description of, 97
insight on, 97
other names for, 97
uses of, 97
- EEA stapler. *See* Intraluminal stapler

Electrosurgical pencil, 6, 6f
 cautions when using, 6–7
 description of, 6
 insight on, 6
 other names for, 6
 uses of, 6

Elevator, angular. *See* Crane elevator

Ellik evacuator, 114–115, 114f
 description of, 114
 insight on, 114
 uses of, 114

Endo catch, 53, 53f
 description of, 53
 insight on, 53
 other names for, 53
 uses of, 53

Endocervical curette. *See* Kevorkian endocervical curette

Endo clip applicator, 70, 70f
 description of, 70
 other names for, 70
 uses of, 70

Endo fan retractor, 66, 66f
 description of, 66
 insight on, 66
 other names for, 66
 uses of, 66

Endoflex retractor, 67, 67f
 description of, 67
 insight on, 67
 other names for, 67
 uses of, 67

Endo-fog. *See* Anti-fog solution

Endo GIA stapler, 70, 70f
 description of, 70
 insight on, 70
 uses of, 70

Endo harmonic scalpel, 53, 53f
 description of, 53
 insight on, 53
 other names for, 53
 uses of, 53

Endo KD. *See* Endo kittner

Endo kit. *See* Endo kittner

Endo kittner, 49–50, 49f
 description of, 49
 insight on, 49
 other names for, 49
 uses of, 49

Endo paddle retractor, 66–67, 66f
 description of, 66
 insight on, 66
 uses of, 66

Endopath thoracic trocar, 257, 258f
 description of, 292
 insight on, 292
 other names for, 292
 uses of, 292

Endo Peanut. *See* Endo kittner

Endo Pouch. *See* Endo catch

Endo right angle forceps, 54–55, 54f
 description of, 54
 insight on, 54
 other names for, 54
 uses of, 54

Endosac. *See* Endo catch

Endoscopic aspirating needle, 68, 68f
 cautions when using, 68
 description of, 68
 uses of, 68

Endoscopic biopsy forceps, 58, 58f
 description of, 58
 insight on, 58
 uses of, 58

Endoscopic biopsy punch, 58–59, 58f
 description of, 58
 insight on, 58
 uses of, 58

Endoscopic camera, 71, 71f, 117, 117f, 248, 248f
 description of, 71, 117, 248
 insight on, 71, 117, 248
 uses of, 71, 117, 248

Endoscopic cholangiogram forceps, 61, 61f
 description of, 61
 insight on, 61
 other names for, 61
 uses of, 61

Endoscopic hook scissors, 57–58, 57f
 description of, 57
 insight on, 57
 uses of, 57

Endoscopic scissors, 57, 57f
 description of, 57
 insight on, 57
 other names for, 57
 uses of, 57

Endo shears. *See* Endoscopic scissors

EndoWrist, 74, 74f
 description of, 74
 insight on, 74
 uses of, 74

Enucleation scissors, 127–128, 127f
 description of, 127
 uses of, 127

Evacuator, disposable. *See* Microvase evacuator

Eye suture scissors, 127, 127f
 description of, 127
 insight on, 127
 uses of, 127

F

Fancy clamp. *See* Adson forceps; Adson tonsil/Schmidt forceps

Fan finger retractor. *See* Endo fan retractor

Fan retractor. *See* Arterial retractor

Farabeuf rasp, 305–306, 305f
 description of, 305
 insight on, 305
 other names for, 305
 uses of, 305

Farrior ear speculum, 184, 184f
 description of, 184
 insight on, 184
 uses of, 184

Favoloro. *See* Internal mammary retractor

Female dilators. *See* Walther female urethral sounds

Female sounds. *See* Walther female urethral sounds

Fenestrated grasper. *See* Prograsp forceps

Fenestrated rongeur. *See* Wilde rongeur

Ferguson gallstone scoop, 35, 35f
 description of, 35
 insight on, 35
 other names for, 35
 uses of, 35

Ferris-Smith tissue forceps, 21, 21f
 description of, 21
 insight on, 21
 other names for, 21
 uses of, 21

Fiberoptic light cord, 50, 50f, 101, 101f, 214, 214f
 cautions when using, 50–51, 101–102, 214
 description of, 50, 101, 214
 insight on, 50, 101, 214
 other names for, 50, 101, 214
 uses of, 50, 101, 214

Fine needle holder. *See* Crile-Wood needle holder

Finger-control suction. *See* Baron suction tips

Finger retractor. *See* Arterial retractor; Jarit cross action retractor

Finochietto rib spreader, 317, 317f
 description of, 317
 other names for, 317
 uses of, 317

5-mm 0° endoscope, 73, 73f
 description of, 73
 insight on, 73
 other names for, 73
 uses of, 73

Flag elevators. *See* Cryer elevator

Flap knife. *See* House joint knife

Fletcher forceps. *See* Forester sponge forceps

Flexible ureteroscope, 118, 118f
 description of, 118
 insight on, 118
 uses of, 118

Flexipath. *See* Endopath thoracic trocar

Fogarty clamp with jaw inserts, 298, 298f
 description of, 298
 insight on, 298
 other names for, 298
 uses of, 298

Forceps. *See* Simpson obstetrical forceps

Forester sponge forceps, 23–24, 23f
 description of, 23
 insight on, 23
 other names for, 23
 uses of, 23

Fork. *See* Capsule retractor

45 clamp. *See* DeBakey peripheral vascular clamp

4-MM sheath and sharp obturator, 215–216, 215f
 description of, 215
 insight on, 215
 uses of, 215

4-MM sheath with blunt obturator, 215, 215f
 description of, 215
 insight on, 215
 uses of, 215

Fox eye shield, 120, 120f
 description of, 120
 insight on, 120
 uses of, 120

Frazier suction tip, 30–31, 30f
 description of, 30
 insight on, 30
 uses of, 30

Freer elevator, 225–226, 225f. *See* Freer septum elevator
 description of, 225
 insight on, 225
 uses of, 225

Freer septum elevator, 161, 161f
 description of, 161
 other names for, 161
 uses of, 161

Freer septum knife, 160, 160f
 description of, 160
 insight on, 160
 other names for, 160
 uses of, 160

Fukuda. *See* Fukuda humeral head retractor

Fukuda humeral head retractor, 245, 245f
 description of, 245
 other names for, 245
 uses of, 245

Fukushima. *See* Leyla retractor; Teardrop suction tip

G

Gallbladder trocar, 38, 38f
 description of, 38
 insight on, 38
 uses of, 38

Garrett vascular dilators, 315, 315f
 description of, 315
 insight on, 315
 uses of, 315

Gaylor punch. *See* Thomas-Gaylor uterine biopsy forceps

Gelfoam masher. *See* House gelfoam press

Gelpi retractor, 30, 30f
 cautions when using, 30
 description of, 30
 insight on, 30
 uses of, 30

Gemini clamp, 37, 37f
 description of, 37
 insight on, 37
 other names for, 37
 uses of, 37

Gemini forceps. *See* Lahey gall duct forceps; Mixter forceps

Gerald tissue forceps, 311–312, 311f
 description of, 311
 insight on, 311
 other names for, 311
 uses of, 311

GIA stapler. *See* Linear cutter-stapler

Gigli saw, 219, 219f
 cautions when using, 219–220
 description of, 219
 uses of, 219

Gillies hook. *See* Skin hook

Gimmick. *See* House elevator

Glassman clamp. *See* Carter-Glassman intestinal clamp

Glidewire. *See* Guidewire

Glover bulldog, 294–295, 294f
 description of, 294
 insight on, 294
 uses of, 294

Glover patient ductus clamp, 296–297, 296f
 description of, 296
 insight on, 296
 uses of, 296

Gluck rib shear, 306, 306f
 description of, 306
 insight on, 306
 other names for, 306
 uses of, 306

Goelet retractor, 26, 26f
 description of, 26
 insight on, 26
 uses of, 26

Goldies. *See* Potts-Smith tissue forceps

Graspers. *See* Hysteroscope grasping forceps

Graves vaginal speculum, 96, 96f
 description of, 96
 insight on, 96
 other names for, 96
 uses of, 96

Green retractor, 181–182, 181f
 description of, 181
 other names for, 181
 uses of, 181

Guidewire, 106, 106f
 description of, 106
 insight on, 106
 other names for, 106
 uses of, 106

Gynecare morcellex, 87, 87f
 cautions when using, 87
 description of, 87
 insight on, 87
 other names for, 87
 uses of, 87

H

Halsey needle holder, 209, 209f
 description of, 209
 uses of, 209

Halstead forceps, 8, 8f
 description of, 8
 other names for, 8
 uses of, 8

Hammer. *See* Mallet

Hank dilators, 93–94, 93f
 description of, 93
 insight on, 93
 other names for, 93
 uses of, 93

Harmonic scalpel, 7, 7f
 description of, 7
 insight on, 7
 other names for, 7
 uses of, 7

Harrington heart retractor. *See* Harrington retractor

Harrington retractor, 42–43, 42f
 description of, 42
 other names for, 42
 uses of, 42

Hartman forceps. *See* Halstead forceps

Hasson trocar. *See* Blunt trocar

Heaney-Ballentine hysterectomy forceps, 82–83, 82f
 description of, 82
 insight on, 82
 other names for, 82
 uses of, 82

Heaney clamp. *See* Heaney-Ballentine hysterectomy forceps

Heaney hysterectomy forceps, 82, 82f
 description of, 82
 insight on, 82
 other names for, 82
 uses of, 82

Heaney needle holder, 99, 99f
 description of, 99
 insight on, 99
 other names for, 99
 uses of, 99

Heaney retractor, 97, 97f
 description of, 97
 insight on, 97
 other names for, 97
 uses of, 97

Heaney uterine biopsy curette, 85, 85f
 description of, 85
 uses of, 85

Heavy tissue scissors. *See* Mayo scissors, curved

Heavy wire cutter, 310, 310f
 description of, 310
 insight on, 310
 other names for, 310
 uses of, 310

Hegar dilators, 94, 94f
 description of, 94
 insight on, 94
 other names for, 94
 uses of, 94

Heiss retractor. *See* Jarit cross action retractor

Hemoclip applier, 34, 34f, 295, 295f. *See* Endo clip applier; Surgiclip applier
 description of, 34
 description of, 295
 insight on, 34, 295
 other names for, 34, 295
 uses of, 34, 295

Hemostat forceps. *See* Crile forceps; Kelly forceps

Herd elevator. *See* Hurd dissector

Herrick kidney clamp, 107, 107f
 description of, 107
 other names for, 107
 uses of, 107

Heymann-Knight angular scissors. *See* Knight angular scissors

Hibbs retractor, 237–238, 237f
 description of, 237
 uses of, 237

Hoen periosteal elevator, 272–273, 272f
 description of, 272
 uses of, 272

Hohmann retractor, blunt, 241, 241f
 description of, 241
 uses of, 241

Hohmann retractor, mini, 240, 240f
 description of, 240
 insight on, 240
 uses of, 240

Hohmann retractor, sharp, 240–241, 240f
 description of, 240
 insight on, 240
 uses of, 240

Holzheimer retractor. *See* Jarit cross action retractor

Hooks. *See* Cottle tenaculum, double

House-Barbara shattering needle, 153, 153f
 description of, 153
 insight on, 153
 other names for, 153
 uses of, 153

House-dieter malleus nipper, 146, 146f
 description of, 146
 other names for, 146
 uses of, 146

House double-ended curettes, 151, 151f
 description of, 151
 insight on, 151
 other names for, 151
 uses of, 151

House elevator, 148–149, 148f
 description of, 148
 insight on, 148
 other names for, 148
 uses of, 148

House gelfoam press, 140, 140f
 description of, 140
 other names for, 140
 uses of, 140

House hough, 152–153, 152f
 description of, 152
 insight on, 152
 uses of, 152

House joint knife, 148, 148f
 description of, 148
 insight on, 148
 other names for, 148
 uses of, 148

House oval window pick, 150–151, 150f
 description of, 150
 insight on, 150
 other names for, 150
 uses of, 150

House picks, 150, 150f. *See also* House oval window pick
 description of, 150
 insight on, 150
 uses of, 150

House-sheehy knife curette, 147–148, 147f
 description of, 147
 insight on, 147
 other names for, 147
 uses of, 147

House sickle knife, 147, 147f
 description of, 147
 insight on, 147
 other names for, 147
 uses of, 147

House strut caliper, 139–140, 139f
 description of, 139
 other names for, 139
 uses of, 139

House strut hook, 154, 154f
 description of, 154
 insight on, 154
 other names for, 154
 uses of, 154

Hudson brace. *See* Hudson handheld drill

Hudson handheld drill, 275, 275f
 description of, 275
 insight on, 275
 other names for, 275
 uses of, 275

Hulka tenaculum, 90, 90f
 description of, 90
 other names for, 90
 uses of, 90

Humby. *See* Watson skin graft knife

Humeral head. *See* Fukuda humeral head retractor

Humeral head retractor, 244–245, 244f
 description of, 244
 uses of, 244

Hunt chalazion clamp, 129–130, 129f
 description of, 129
 insight on, 129
 other names for, 129
 uses of, 129

Hunter bowel grasper, 64, 64f
 description of, 64
 uses of, 64

Hupp tracheal hook, 174, 174f
 description of, 174
 insight on, 174
 other names for, 174
 uses of, 174

Hurd dissector, 181, 181f
 description of, 181
 other names for, 181
 uses of, 181

Hydragrip. *See* Fogarty clamp with jaw inserts

Hyster clamps. *See* Heaney hysterectomy forceps

Hysteroscope, 100, 100f
 description of, 100
 insight on, 100
 uses of, 100

Hysteroscope biopsy forceps, 88, 88f
 description of, 88
 insight on, 88
 other names for, 88
 uses of, 88

Hysteroscope grasping forceps, 93, 93f
 description of, 93
 insight on, 93
 other names for, 93
 uses of, 93

Hysteroscope scissors, 87–88, 87f
 description of, 87
 insight on, 87
 other names for, 87
 uses of, 87

Hysteroscopic scissors. *See* Hysteroscope scissors

Iglesias. *See* Working element

Insufflation needle. *See* Verres needle

Insufflation tubing, 50, 50f
 description of, 50
 insight on, 50
 uses of, 50

Internal mammary retractor, 319, 319f
 description of, 319
 insight on, 319
 other names for, 319
 uses of, 319

Intraluminal stapler, 47, 47f
 description of, 47
 insight on, 47
 other names for, 47
 uses of, 47

Irish retractor. *See* O'Sullivan-O'Connor retractor

Iris scissors, 200, 200f
 cautions when using, 200–201
 description of, 200
 insight on, 200
 uses of, 200

Iris spatula. *See* Barraquer iris spatula

Irrigation tubing, 102, 102f
 description of, 102
 insight on, 102
 other names for, 102
 uses of, 102

Israeli retractor. *See* Volkman retractor

Israel rake retractor, 242, 242f
 description of, 242
 insight on, 242
 uses of, 242

J

Jacobsen needles holder, 290, 290f
 description of, 290
 uses of, 290

Jacobs tenaculum. *See* Jacobs vulsellum

Jacobs uterine forceps. *See* Jacobs vulsellum

Jacobs vulsellum, 88, 88f
 cautions when using, 88–89
 description of, 88
 insight on, 88
 other names for, 88
 uses of, 88

Jameson forceps, 132, 132f
 description of, 132
 other names for, 132
 uses of, 132

Jameson muscle hook, 136, 136f
 description of, 136
 uses of, 136

Jamison scissors, 202–203, 202f, 303, 303f. *See also* Reynolds scissors
 description of, 202, 303
 insight on, 303
 other names for, 303
 uses of, 202, 303

Janesn mastoid retractor, 174–175, 174f
 description of, 174
 uses of, 174

Jansen-Middleton septum forceps, 165, 165f
 description of, 165
 insight on, 165
 uses of, 165

Jansen scalp retractor, 285–286, 285f
 description of, 285
 uses of, 285

Jansen tissue forceps, 172–173, 172f
 description of, 172
 insight on, 172
 other names for, 172
 uses of, 172

Jarit cross action retractor, 207–208, 207f
 description of, 207
 other names for, 207
 uses of, 207

Jaritrack retractor. *See* Bookwalter

Javid carotid artery clamp, 297–298, 297f
 description of, 297
 insight on, 297
 other names for, 297
 uses of, 297

Javid carotid shunt clamp. *See* Javid carotid artery clamp

Jennings mouth gag, 180–181, 180f
 description of, 180
 uses of, 180

Jeweler's bipolar forceps, 120–121, 120f
 description of, 120
 insight on, 120
 uses of, 120

Jeweler's forceps, 130, 130f
 description of, 130
 insight on, 130
 uses of, 130

J hook, 52, 52f
 description of, 52
 insight on, 52
 uses of, 52

Jimmy. *See* Crabtree dissector

Joker. *See* Adson periosteal elevator

Jones towel clip. *See* Towel clip (penetrating)

Joplin. *See* Lewin bone-holding forceps

Joseph button-end knife, 161–162, 161f
 description of, 161
 uses of, 161

Joseph double skin hook, 204, 204f
 cautions when using, 204–205
 description of, 204
 insight on, 204
 uses of, 204

Joseph hook. *See* Skin hook

Joseph scissors, 156–157, 156f
 description of, 156
 insight on, 156
 uses of, 156

Joseph single skin hook, 204, 204f
 cautions when using, 204
 description of, 204
 insight on, 204
 uses of, 204

Joseph skin hooks, 178, 178f
 description of, 178
 other names for, 178
 uses of, 178

K

Kaye facelift scissors, 201, 201f
 description of, 201
 other names for, 201
 uses of, 201

Kelly forceps, 8–9, 8f. *See also* Crile forceps
 description of, 8
 other names for, 8
 uses of, 8

Kelly retractor, 41–42, 41f
 description of, 41
 insight on, 41
 uses of, 41

Kelly scissors, 190–191, 190f
 description of, 190
 insight on, 190
 other names for, 190
 uses of, 190

Kelppinger bipolar forceps, 52–53, 52f
 description of, 52
 insight on, 52
 uses of, 52

Kern bone-holding forceps, 234–235, 234f
 description of, 234
 insight on, 234
 uses of, 234

Kerrison-Costen rongeur, 159, 159f
 description of, 159
 insight on, 159
 uses of, 159

Kerrison rongeur, 158–159, 158f, 264, 264f
 description of, 158, 264
 insight on, 158, 264
 other names for, 158, 264
 uses of, 158, 264

Kevorkian endocervical curette, 84–85, 84f
 description of, 84
 other names for, 84
 uses of, 84

Key elevator, 224–225, 224f
 description of, 224
 insight on, 224
 uses of, 224

Killian nasal speculum, 176–177, 176f
 description of, 176
 uses of, 176

Kirschner wires, 216, 216f
 description of, 216
 insight on, 216
 other names for, 216
 uses of, 216

Knapp iris scissors, 124–125, 124f
 description of, 124
 uses of, 124

Knee arthroplasty set. *See* Total knee instruments

Knight angular scissors, 156, 156f
 description of, 156
 other names for, 156
 uses of, 156

Knot pusher, 69–70, 69f
 description of, 69
 insight on, 69
 uses of, 69

Kocher forceps, 25, 25f
 curved (*See* Ochsner forceps, curved)
 description of, 25
 insight on, 25
 other names for, 25
 uses of, 25

Koch forceps. *See* Kocher forceps

Kolbel self-retaining Glenoid retractor, 247, 247f
 description of, 247
 uses of, 247

K wires. *See* Kirschner wires

L

Lacrimonal dilators. *See* Bowman lacrimal probe

Lahey clamp. *See* Gemini clamp

Lahey forceps. *See* Mixer forceps

Lahey gall duct forceps, 37, 37f
 description of, 37
 insight on, 37
 other names for, 37
 uses of, 37

Lambert-Kay aorta clamp, 299–300, 299f
 description of, 299
 insight on, 299
 other names for, 299
 uses of, 299

Lambotte osteotome, 228, 228f
 description of, 228
 insight on, 228
 uses of, 228

Lampert elevator, 149, 149f
 description of, 149
 insight on, 149
 uses of, 149

Langenbeck periosteal elevator, 273, 273f
 description of, 273
 uses of, 273

Large bone cutters. *See* Liston bone cutting forceps

Large fragment set, 249–250, 249f
 description of, 249
 insight on, 249
 other names for, 249
 uses of, 249

Large frag set. *See* Large fragment set

Large mouth rongeur. *See* Stille-Luer rongeur

Large needle driver, 80, 80f
 description of, 80
 insight on, 80
 other names for, 80
 uses of, 80

Large needle holder. *See* Large needle driver

Large pin cutter, 229, 229f
 description of, 229
 insight on, 229
 other names for, 229
 uses of, 229

Laryngeal mirror, 141–142, 141f. *See also* Mouth mirror
 description of, 141
 insight on, 141
 uses of, 141

Lateral retractor. *See* Eastman retractor; Heaney retractor

LDS stapler. *See* Ligating and dividing stapler

Lead hand, 219, 219f
 description of, 219
 insight on, 219
 uses of, 219

- Lebsche knife, 305, 305f
description of, 305
insight on, 305
other names for, 305
uses of, 305
- Lee bronchus clamp, 301, 301f
description of, 301
insight on, 301
uses of, 301
- Leep loop electrode, 81, 81f
description of, 81
insight on, 81
other names for, 81
uses of, 81
- Left upper molar extraction forceps (88L), 192, 192f
description of, 192
insight on, 192
other names for, 192
uses of, 192
- Leksell rongeur, 264, 264f
description of, 264
insight on, 264
uses of, 264
- Lens endoscope. *See* 10-mm 0° endoscope; 10-mm 30° endoscope
- Lens inserter. *See* Lens insertion forceps
- Lens insertion forceps, 128–129, 128f
description of, 128
other names for, 128
uses of, 128
- Lens rigid endoscope. *See* 5-mm 0° endoscope
- Lens warmer, 49, 49f
description of, 49
insight on, 49
uses of, 49
- Lever skid humeral head retractor, 245–246, 245f
description of, 245
other names for, 245
uses of, 245
- Levin bone-holding forceps, 235–236, 235f
description of, 235
insight on, 235
other names for, 235
uses of, 235
- Lewis rasp, 157–158, 157f
description of, 157
insight on, 157
uses of, 157
- Leyla retractor, 283, 283f
cautions when using, 283
description of, 283
other names for, 283
uses of, 283
- Leyla-Yasargil. *See* Leyla retractor
- L hook, 51–52, 51f
description of, 51
insight on, 51
uses of, 51
- Lift scissors. *See* Kaye facelift scissors
- Ligaclip. *See* Surgiclip applier
- Ligaclip applier. *See* Hemoclip applier
- Ligasure, 51, 51f
description of, 51
insight on, 51
uses of, 51
- Ligating and dividing stapler, 46–47, 46f
description of, 46
insight on, 46
other names for, 46
uses of, 46
- Light cord. *See* Fiberoptic light cord
- Lilly scissors, 307–308, 307f
description of, 307
insight on, 307
uses of, 307
- Linear cutter-stapler, 45–46, 45f
description of, 45
insight on, 45
other names for, 45
uses of, 45
- Linear stapler, 46, 46f
description of, 46
insight on, 46
other names for, 46
uses of, 46
- Liposuction cannula, 208, 208f
description of, 208
insight on, 208
uses of, 208
- Lister bandage scissors, 12, 12f
description of, 12
insight on, 12
other names for, 12
uses of, 12
- Liston bone cutting forceps, 226, 226f
description of, 226
insight on, 226
other names for, 226
uses of, 226
- Littler's. *See* Littler plastic surgery scissors
- Littler plastic surgery scissor
description of, 201
insight on, 201
other names for, 201
uses of, 201
- Littler plastic surgery scissors, 201–202, 201f
- Littler scissors, 222, 222f
description of, 222
insight on, 222
uses of, 222
- Long angled #3 knife handle, 86–87, 86f
description of, 86
insight on, 86
other names for, 86
uses of, 86
- Long handle. *See* #3 long knife handle
- Long knife. *See* #3 long knife handle
- Loop. *See* Leep loop electrode; Loop electrode
- Loop electrode, 104–105, 104f
description of, 104
insight on, 104
other names for, 104
uses of, 104
- Lothrop uvula retractor, 179–180, 179f
description of, 179
uses of, 179
- Love nerve root retractor (angled), 281, 281f
description of, 281
insight on, 281
uses of, 281
- Lower anterior extraction forceps (151), 194, 194f
description of, 194
insight on, 194
other names for, 194
uses of, 194
- Lower molar extraction forceps (17), 193, 193f
description of, 193
insight on, 193
other names for, 193
uses of, 193
- Lowman bone clamp, 235, 235f
description of, 235
insight on, 235
uses of, 235
- Lowsley prostatic retractor, 110, 110f
description of, 110
insight on, 110
uses of, 110
- Lucas bone curette, 189–190, 189f
description of, 189
other names for, 189
uses of, 189
- Lung clamp. *See* Duval lung forceps; Pennington forceps
- Luxating elevator. *See* Apical elevator

M

- Male sounds. *See* Van Buren urethral sounds
- Malleable retractor. *See* Ribbon retractor
- Mallet, 211–212, 211f, 260, 260f. *See* Cottle mallet
description of, 198, 260
insight on, 198, 260
other names for, 198
uses of, 198, 260
- Maltz-Lipsett. *See* Maltz rasp
- Maltz rasp, 158, 158f
description of, 158
insight on, 158
other names for, 158
uses of, 158
- Mammary forceps. *See* Gerald tissue forceps
- Mammary retractor. *See* Internal mammary retractor
- Mammoplasty hook, 203, 203f
cautions when using, 203–204
description of, 203
insight on, 203
other names for, 203
uses of, 203
- Mandibular forceps (17), #17. *See* Lower molar extraction forceps (17)
- Mandibular universal forceps.
See Lower anterior extraction forceps (151)
- Martin cartilage clamp, 233–234, 233f
description of, 233
other names for, 233
uses of, 233
- Maryland bipolar forceps, 75, 75f
description of, 75
insight on, 75
other names for, 75
uses of, 75

- Maryland dissector, 56–57, 56f
description of, 56
insight on, 56
uses of, 56
- Maryland forceps. *See* Maryland bipolar forceps
- Masterson clamp. *See* Heaney-Ballentine hysterectomy forceps
- Mastoid rongeur. *See* Cicherelli mastoid rongeur
- Mathieu retractor, 206, 206f
cautions when using, 206
description of, 206
insight on, 206
other names for, 206
uses of, 206
- Matson rib stripper and elevator, 309, 309f
description of, 309
insight on, 309
other names for, 309
uses of, 309
- Maxillary left forceps, No. 88L, 88L.
See Left upper molar extraction forceps (88L)
- Maxillary right forceps, No. 88R, 88R.
See Right upper molar extraction forceps (88R)
- Maxillary universal forceps. *See* Upper anterior extraction forceps (150)
- Mayo abdominal retractor, 43, 43f
description of, 43
other names for, 43
uses of, 43
- Mayo forceps. *See* Rochester-Péan forceps
- Mayo-Guyon vessel clamp, 108, 108f
description of, 108
uses of, 108
- Mayo-Hegar needle holder, 32–33, 32f
description of, 32
uses of, 32
- Mayo scissors, curved, 11, 11f
description of, 11
insight on, 11
other names for, 11
uses of, 11
- Mayo scissors, straight, 11, 11f
description of, 11
insight on, 11
other names for, 11
uses of, 11
- Mayo uterine scissors, 85, 85f
description of, 85
other names for, 85
uses of, 85
- McGee wire crimping forceps, 170, 170f
description of, 170
insight on, 170
other names for, 170
uses of, 170
- McIvor mouth gag, 180, 180f
description of, 180
insight on, 180
uses of, 180
- McKissock keyhole, 198, 198f
description of, 198
insight on, 198
other names for, 198
uses of, 198
- McPherson needle holder, 137–138, 137f
description of, 137
uses of, 137
- McPherson tying forceps, 131–132, 131f
description of, 131
insight on, 131
uses of, 131
- Measuring stick. *See* Ruler
- Measuring tool. *See* House strut caliper
- Meltzer adenoid punch, 168–169, 168f
description of, 168
insight on, 168
other names for, 168
uses of, 168
- Meniscus clamp. *See* Martin cartilage clamp
- Metacarpal pins. *See* Kirschner wires
- Metzenbaum scissors, curved, 12, 12f
description of, 12
insight on, 12
other names for, 12
uses of, 12
- Metz scissors. *See* Metzenbaum scissors, curved
- Meyerding finger retractor, 206–207, 206f
description of, 206
uses of, 206
- Meyerding handheld retractor, 284–285, 284f
description of, 284
uses of, 284
- Meyerding hemilaminectomy retractor. *See* Williams hemilaminectomy retractors
- Meyerding laminectomy retractor, 283–284, 283f
description of, 283
insight on, 283
uses of, 283
- Meyhoeffer Chalazion curettes, 123–124, 123f
description of, 123
insight on, 123
uses of, 123
- Micro cups. *See* Oval cup forceps, straight, right, left
- Micro knife, 270, 270f
description of, 270
uses of, 270
- Micro scissors. *See* Rhoton micro scissors
- Microvasive evacuator, 115, 115f
description of, 115
insight on, 115
other names for, 115
uses of, 115
- Midas rex drill, 274–275, 274f
description of, 274
insight on, 274
uses of, 274
- Middle ear scissors. *See* Bellucci scissors
- Miller rasp, 223–224, 223f
description of, 223
insight on, 223
other names for, 223
uses of, 223
- Mills/Dennis micro ring tissue forceps, 311, 311f
description of, 311
insight on, 311
uses of, 311
- Minnesota cheek retractor, 194–195, 194f
description of, 194
other names for, 194
uses of, 194
- Mitral valve retractor. *See* Cooley arterial retractor
- Mixer clamp. *See* Gemini clamp
- Mixer forceps, 10, 10f. *See* Endo right angle forceps; Lahey gall duct forceps
description of, 10
other names for, 10
uses of, 10
- Molt bone curette, 190, 190f
description of, 190
other names for, 190
uses of, 190
- Molt mouth gag, 195, 195f
description of, 195
other names for, 195
uses of, 195
- Monopolar pencil. *See* Electrosurgical pencil
- Morcellator. *See* Gynecare morcellex
- Mosquito forceps. *See* Halstead forceps
- Mother-in-law grasper. *See* Claw grasper
- Mouth gag. *See* Molt mouth gag
- Mouth mirror, 185–186, 185f
description of, 185
insight on, 185
other names for, 185
uses of, 185
- Mouth prop, 195–196, 195f
description of, 195
insight on, 195
other names for, 195
uses of, 195
- Mucous trap. *See* Delee suction
- Murphy-Lane bone skid, 238–239, 238f
description of, 238
insight on, 238
uses of, 238
- Murphy retractor, 27, 27f
cautions when using, 27
description of, 27
insight on, 27
other names for, 27
uses of, 27
- Muscle clamp. *See* Jameson forceps
- Muscle hook. *See* Von Graefe strabismus hook
- Myringotomy knife, 143f, 144–145
description of, 144
insight on, 144
other names for, 144
uses of, 144

N

- Nasal chisels. *See* Cottle chisels
- Nasal curettes. *See* Coakley antrum curettes
- Navy's retractor. *See* Army-Navy retractor

Needle holder, 321, 321f
 description of, 321
 insight on, 321
 other names for, 321
 uses of, 321

Needlenose pliers, 236, 236f
 description of, 236
 uses of, 236

Neivert-Anderson guarded osteotome, 164, 164f
 description of, 164
 insight on, 164
 uses of, 164

Nerve hook. *See* Blunt hook

Nested right angle retractor. *See* Parker retractor

Neurocautery suction. *See* Suction coagulator tip

Nezhad-Dorsey suction tips, 68, 68f
 description of, 68
 uses of, 68

Nipper. *See* House-dieter malleus nipper

Nipple washer. *See* Areola marker

Notched retractor. *See* Young bulb retractor

#11 blade, 15, 15f
 description of, 15
 insight on, 15
 uses of, 15

#15 blade, 16, 16f
 description of, 16
 insight on, 16
 uses of, 16

#5 penfield dissector, 269, 269f
 description of, 269
 uses of, 269

#4 knife handle, 14f, 17
 description of, 17
 insight on, 17
 uses of, 17

#4 penfield dissector, 268–269, 268f
 description of, 268
 insight on, 268
 uses of, 268

#1 penfield dissector, 267, 267f
 description of, 267
 uses of, 267

#7 knife handle, 14, 17f
 cautions when using, 14–15
 description of, 14
 uses of, 14

#10 blade, 15, 15f
 cautions when using, 15
 description of, 15
 insight on, 15
 uses of, 15

#3 handle. *See* #3 knife handle

#3 knife handle, 13, 13f
 cautions when using, 13–14
 description of, 13
 insight on, 13
 other names for, 13
 uses of, 13

#3 long knife handle, 14, 14f
 cautions when using, 14
 description of, 14
 other names for, 14
 uses of, 14

#3 penfield dissector, 268, 268f
 description of, 268
 uses of, 268

#12 blade, 16, 16f
 description of, 16
 insight on, 16
 other names for, 16
 uses of, 16

#20 blade, 17–18, 17f
 description of, 17
 insight on, 17
 uses of, 17

#2 penfield dissector, 267–268, 267f
 description of, 267
 uses of, 267

O

Obtuse clamp. *See* Mixer forceps

Ochsner forceps. *See also* Kocher forceps
 curved, 91, 91f
 description of, 91
 other names for, 91
 uses of, 91

O'Connor retractor. *See* O'Sullivan-O'Connor retractor

Olsen clamp. *See* Endoscopic cholangiogram forceps

150. *See* Upper anterior extraction forceps (150)

151. *See* Lower anterior extraction forceps (151)

Optical trocar. *See* Visiport

Oral suction. *See* Yankauer suction tip, nondisposable

Oral suction tip. *See* Yankauer suction tip

Oral tip. *See* Yankauer suction tip, nondisposable

O'Sullivan-O'Connor retractor, 96–97, 96f
 description of, 96
 insight on, 96
 other names for, 96
 uses of, 96

O'Sullivan retractor. *See* O'Sullivan-O'Connor retractor

Otis urethrotome, 109, 109f
 description of, 109
 insight on, 109
 uses of, 109

Oval chalazion clamp. *See* Desmarres Chalazion clamp

Oval cup forceps, straight, right, left, 145–146, 145f
 description of, 145
 insight on, 145
 other names for, 145
 uses of, 145

Overstreet endometrial polyp forceps, 92, 92f
 description of, 92
 other names for, 92
 uses of, 92

P

Packing forceps. *See* Bozeman uterine dressing forceps

Paget blade. *See* Dermatome blade

Paget dermatome. *See* Dermatome

Paper clip. *See* Barraquer eye speculum

Park bench retractor. *See* Parker retractor

Parker retractor, 28–29, 28f
 description of, 28
 insight on, 28
 other names for, 28
 uses of, 28

Parsonnet epicardial retractor, 317–318, 317f
 description of, 317
 insight on, 317
 uses of, 317

Patent ductus. *See* DeBakey coarctation clamp

Peacock retractor. *See* Endo fan retractor

Péan forceps. *See* Rochester-Péan forceps

Peapod rongeur, 266, 266f
 description of, 266
 insight on, 266
 uses of, 266

Pedicle clamp. *See* Beck aortic clamp; Herrick kidney clamp; Wertheim-Cullen pedicle clamp

Pennington forceps, 38–39, 38f
 description of, 38
 other names for, 38
 uses of, 38

Periosteal elevator. *See* West periosteal

Permanent cautery spatula, 75, 75f
 description of, 75
 insight on, 75
 other names for, 75
 uses of, 75

Pierce double ended elevator, 160–161, 160f
 description of, 160
 insight on, 160
 uses of, 160

Pillar retractor. *See* Hurd dissector

Pin cutter. *See* Cannulated pin cutter; Diamond pin cutter; Heavy wire cutter

Pituitary forceps. *See* Cushing pituitary rongeur

PK dissecting forceps, 77, 77f
 description of, 77
 insight on, 77
 other names for, 77
 uses of, 77

PK forceps. *See* PK dissecting forceps

Plain tissue forceps, 20, 20f
 description of, 20
 other names for, 20
 uses of, 20

Plate bender. *See* Plate bending pliers

Plate bending pliers, 218–219, 218f
 description of, 218
 insight on, 218
 other names for, 218
 uses of, 218

Plate clamp. *See* Plate forceps

Plate forceps, 221–222, 234f
 description of, 234
 other names for, 234
 uses of, 234

Plate holders. *See* Plate forceps

- Plate holding forceps. *See* Plate forceps
- Pliers, 236, 236f
description of, 236
other names for, 236
uses of, 236
- Polyp forceps. *See* Overstreet endometrial polyp forceps
- Poole suction tip, 31, 31f
description of, 31
insight on, 31
other names for, 31
uses of, 31
- Poppen suction tip, 288–289, 288f
description of, 288
insight on, 288
uses of, 288
- Posterior scissors. *See* Cottle angular scissors
- Potts. *See* Potts-Smith scissors
- Potts elevator, 186–187, 186f
description of, 186
insight on, 186
other names for, 186
uses of, 186
- Potts scissors, 76–77, 76f
description of, 76
uses of, 76
- Potts-Smith scissors, 302–303, 302f
description of, 302
insight on, 302
other names for, 302
uses of, 302
- Potts-Smith tissue forceps, 312–313, 312f
description of, 312
insight on, 312
other names for, 312
uses of, 312
- Pratt rectal speculum, 44–45, 44f
description of, 44
insight on, 44
uses of, 44
- Pratt uterine dilators, 94–95, 94f
description of, 94
insight on, 94
other names for, 94
uses of, 94
- Probe and grooved director, 39–40, 39f
description of, 39
uses of, 39
- Prograsp forceps, 79, 79f
description of, 79
other names for, 79
uses of, 79
- Prop. *See* Molt mouth gag
- Prostate retractor, anterior. *See* Young anterior retractor
- Pulsavac, 247, 247f
description of, 247
other names for, 247
uses of, 247
- Pulse lavage. *See* Pulsavac
- Pump tubing, 214–215, 214f
description of, 214
uses of, 214
- Punch. *See* Meltzer adenoid punch
- Punctal lacrimal dilator. *See* Wilder lacrimal dilator
- Pusher. *See* Endo kittner
- Putti bone rasp, 224, 224f
cautions when using, 224
description of, 224
insight on, 224
other names for, 224
uses of, 224
- Putti Platte. *See* Putti bone rasp
-
- R**
- Ragnell retractor, 207, 207f, 241–242, 241f
description of, 207, 241
uses of, 207, 241
- Rake retractor. *See* Murphy retractor; Volkman retractor
- Randall stone forceps, 111, 111f. *See also* Desjardin gallstone forceps
description of, 111
uses of, 111
- Raney clip applicators, 257–258, 257f
description of, 257
insight on, 257
other names for, 257
uses of, 257
- Raney clips, 258, 258f
description of, 258
insight on, 258
uses of, 258
- Rasp. *See* Bone file
- Rat tail. *See* Putti bone rasp
- Rat tooth forceps. *See* Adson tissue forceps; Toothed tissue forceps, toothed
- Reducer caps, 102–103, 102f
description of, 102
insight on, 102
other names for, 102
uses of, 102
- Reduction marker. *See* McKissock keyhole
- Resano forceps, 78–79, 78f
description of, 78
other names for, 78
uses of, 78
- Resectoscope sheath and obturator, 116–117, 116f
description of, 116
insight on, 116
uses of, 116
- Reynolds scissors, 203, 203f, 303–304, 303f
description of, 203, 303
insight on, 303
other names for, 303
uses of, 203, 303
- Rhoton dissector extended set, 269–270, 269f
description of, 269
insight on, 269
uses of, 269
- Rhoton micro bayonet scissors, 276, 276f
description of, 276
insight on, 276
uses of, 276
- Rhoton micro needle holders, 289–290, 289f
description of, 289
insight on, 289
uses of, 289
- Rhoton micro scissors, 275–276, 275f
description of, 275
other names for, 275
uses of, 275
- Rib approximator. *See* Bailey rib contractor
- Ribbon retractor, 28, 28f
description of, 28
insight on, 28
other names for, 28
uses of, 28
- Rib cutter. *See* Gluck rib shear; Sauerbruch rib rongeur
- Rib spreader. *See* Finochietto rib spreader
- Richardson-Eastman retractor, 40–41, 40f
description of, 40
insight on, 40
other names for, 40
uses of, 40
- Richardson retractor, 41, 41f
description of, 41
insight on, 41
other names for, 41
uses of, 41
- Rich retractor. *See also* Richardson retractor
big (See Richardson-Eastman retractor)
double-ended (See Richardson-Eastman retractor)
- Right angle clamp. *See* Gemini clamp
- Right angle forceps. *See* Lahey gall duct forceps; Mixer forceps
- Right angle retractor. *See* Heaney retractor
- Right-angle scissors. *See* Dean scissors
- Right upper molar extraction forceps (88R), 192–193, 192f
description of, 192
insight on, 192
other names for, 192
uses of, 192
- Rigid endoscope. *See* 10-mm 0° endoscope; 10-mm 30° endoscope
- Ring curette. *See* Buck ear curette
- Ring forceps. *See* Forester sponge forceps
- Rochester-Péan forceps, 9, 9f
description of, 9
other names for, 9
uses of, 9
- Rod cutter. *See* Large pin cutter
- Roeder towel clip. *See* Towel clip (penetrating)
- Root elevators. *See* Cryer elevator
- Root tip pick, 188–189, 188f. *See* Crane elevator
description of, 188
other names for, 188
uses of, 188
- Rosen knife. *See* House-sheehy knife curette
- Rosen needle, 152, 152f
description of, 152
insight on, 152
uses of, 152
- Round chalazion clamp. *See* Hunt chalazion clamp

Round handle. *See* Beaver handle
 Rubin morselizer, 171–172, 171f
 description of, 171
 uses of, 171
 Ruler, 211, 211f
 description of, 211
 insight on, 211
 other names for, 211
 uses of, 211
 Rumel tourniquet hook (stylet),
 291–292, 291f
 description of, 291
 insight on, 291
 uses of, 291
 Russians forceps. *See* Russian tissue
 forceps
 Russian star forceps. *See* Russian
 tissue forceps
 Russian tissue forceps, 22, 22f
 description of, 22
 other names for, 22
 uses of, 22
 Ryder needle holder, 33, 33f
 fine (*See* Needle holder)
 insight on, 33
 uses of, 33

S

Sarns sternal saw. *See* Sternal saw
 Sarot bronchus clamp, 310–311, 310f
 description of, 310
 insight on, 310
 uses of, 310
 Satinsky partial occlusion clamp. *See*
 Satinsky vena cava clamp
 Satinsky vena cava clamp, 296, 296f
 description of, 296
 insight on, 296
 other names for, 296
 uses of, 296
 Sauerbruch rib rongeur, 307, 307f
 description of, 307
 insight on, 307
 other names for, 307
 uses of, 307
 Sawyer rectal retractor, 45, 45f
 description of, 45
 insight on, 45
 uses of, 45
 Scalp clip applier. *See* Raney clip
 appliers
 Scalp clip gun, 258–259, 258f
 description of, 258
 insight on, 258
 uses of, 258
 Scalpel handle. *See* #3 knife handle
 Schiotz tonometer. *See* Tonometer
 Schnidt forceps. *See* Adson tonsil/
 Schnidt forceps
 Schroeder tenaculum, 89, 89f
 cautions when using, 89
 description of, 89
 insight on, 89
 other names for, 89
 uses of, 89
 Schroeder uterine vulsellum, 89, 89f
 cautions when using, 89–90
 description of, 89
 insight on, 89
 Schroeder uterine vulsellum (*Continued*)
 other names for, 89
 uses of, 89
 Scofield/Meyerding self-retaining
 retractor. *See* Scoville retractor
 Scoop. *See* Ferguson gallstone scoop
 Scoop forceps. *See* Adson hypophyseal
 cup tissue forceps
 Scoville brain spatulas, 278–279, 278f
 description of, 278
 insight on, 278
 uses of, 278
 Scoville nerve root retractor (angled),
 281–282, 281f
 description of, 281
 insight on, 281
 uses of, 281
 Scoville retractor, 286, 286f
 description of, 286
 other names for, 286
 uses of, 286
 Screw depth gauge. *See* Depth gauge
 Screwdriver kit. *See* Universal screw-
 driver set
 Seals. *See* Reducer caps
 Self-retaining retractor. *See* Balfour
 retractor
 Semken dressing forceps. *See* Plain
 tissue forceps
 Semken tissue forceps. *See* Toothed
 tissue forceps
 Senn retractor, 26, 26f
 cautions when using, 26–27
 description of, 26
 insight on, 26
 other names for, 26
 uses of, 26
 Septal knife. *See* Freer septum knife
 Serrefine clamps, 123, 123f
 description of, 123
 insight on, 123
 uses of, 123
 70° endoscope. *See* 70° telescope
 70° lens. *See* 70° telescope
 70° telescope, 118, 118f
 cautions when using, 118
 description of, 118
 insight on, 118
 other names for, 118
 uses of, 118
 Shark forceps. *See* Resano forceps
 Sharp curettes. *See* Sims uterine curette
 Shattering needle. *See* House-Barbara
 shattering needle
 Shaver, 233, 233f
 description of, 233
 insight on, 233
 uses of, 233
 Shears. *See* Curved scissors
 Shoemaker rib shear. *See* Stille-Giertz
 rib shear
 Shoulder skid. *See* Lever skid humeral
 head retractor
 Sickie knife. *See* #12 blade
 Side biter. *See* Lambert-Kay aorta clamp
 Simpson obstetrical forceps, 92–93, 92f
 description of, 92
 other names for, 92
 uses of, 92
 Sims uterine curette, 84, 84f
 description of, 84
 insight on, 84
 other names for, 84
 uses of, 84
 Sims uterine sound, 95, 95f
 description of, 95
 other names for, 95
 uses of, 95
 Single-tooth tenaculum. *See* Schroeder
 tenaculum
 Sinskey hook, 122, 122f
 description of, 122
 uses of, 122
 Skin hook, 29, 29f
 cautions when using, 29
 description of, 29
 other names for, 29
 single (*See* Joseph skin hooks)
 uses of, 29
 Skin mesher. *See* Dermamesher
 Skin stapler, 33–34, 33f
 description of, 33
 insight on, 33
 uses of, 33
 Small bone curettes. *See* House
 double-ended curettes
 Small frag. *See* Small fragment set
 Small fragment set, 250–253, 250f
 description of, 250
 insight on, 250
 other names for, 250
 uses of, 250
 Small-mouthed rongeur. *See*
 Zaufel-Jansen rongeur
 Small rasp. *See* Miller rasp
 Smooth forceps. *See* Plain tissue
 forceps
 Smooth pins. *See* Steinman pins,
 smooth
 Snake retractor. *See* Endoflex retractor
 Snap forceps. *See* Crile forceps
 Sound. *See* Sims uterine sound
 Spencer suture scissors, 191, 191f
 description of, 191
 insight on, 191
 other names for, 191
 uses of, 191
 Spinal curettes, 274, 274f
 description of, 274
 other names for, 274
 uses of, 274
 Sponge stick forceps. *See* Forester
 sponge forceps
 Spoon. *See* Ferguson gallstone scoop
 Spratt mastoid curettes, 145, 145f
 description of, 145
 other names for, 145
 uses of, 145
 Spurling rongeur (straight), 265, 265f
 description of, 265
 insight on, 265
 uses of, 265
 Star forceps. *See* Russian tissue
 forceps
 Stat forceps. *See* Crile forceps
 Steinman pins, smooth, 216–217, 216f
 description of, 216
 insight on, 216

- Steinman pins, smooth (*Continued*)
 other names for, 216
 uses of, 216
- Steinman pins, threaded, 217, 217f
 description of, 217
 insight on, 217
 other names for, 217
 uses of, 217
- Sternal knife. *See* Lebsche knife
- Sternal needle holder and wire twister, 321–322, 321f
 description of, 321
 insight on, 321
 other names for, 321
 uses of, 321
- Sternal saw, 308, 308f
 description of, 308
 insight on, 308
 other names for, 308
 uses of, 308
- Stevens scissors. *See* Stevens tenotomy scissors
- Stevens tenotomy scissors, 126–127, 126f, 202, 202f
 description of, 126, 202
 other names for, 126
 uses of, 126, 202
- Stille bone chisel, 227, 227f
 description of, 227
 insight on, 227
 uses of, 227
- Stille bone gouge, 225–226, 226f
 description of, 226
 insight on, 226
 uses of, 226
- Stille bone osteotome, 227–228, 227f
 description of, 227
 insight on, 227
 uses of, 227
- Stille-Giertz rib shear, 306–307, 306f
 description of, 306
 insight on, 306
 other names for, 306
 uses of, 306
- Stille-Luer rongeur, 230, 230f
 description of, 230
 insight on, 230
 other names for, 230
 uses of, 230
- Stone basket, 110–111, 110f
 description of, 110
 insight on, 110
 uses of, 110
- Strabismus scissors, 124, 124f
 description of, 124
 uses of, 124
- Straight clamp. *See* Cooley coarctation clamp
- Straight curette. *See* Molt bone curette
- Straight elevator. *See* Apical elevator
- Straight rongeur. *See* Stille-Luer rongeur
- Stripper. *See* Matson rib stripper and elevator
- Strully scissors, 261, 261f
 description of, 261
 insight on, 261
 uses of, 261
- Strut. *See* House strut caliper
- Stryker core system, 221, 221f
 description of, 221
 insight on, 221
 other names for, 221
 uses of, 221
- Stryker system 6 power, 220–221, 220f
 description of, 220
 insight on, 220
 uses of, 220
- Subramanian. *See* DeBakey sidewinder
- aorta clamp
- Suction coagulator tip, 142, 142f
 description of, 142
 insight on, 142
 other names for, 142
 uses of, 142
- Suctioning irrigator, 67–68, 67f
 description of, 67
 insight on, 67
 uses of, 67
- Surgical curette. *See* Molt bone curette
- Surgiclip applicator, 34, 34f
 description of, 34
 other names for, 34
 uses of, 34
- Suturecut needle driver, 80, 80f
 description of, 80
 insight on, 80
 uses of, 80
- Suture scissors. *See* Mayo scissors, straight; Spencer suture scissors
- Sweetheart retractor. *See* Harrington retractor
- Swivel knife. *See* Ballenger swivel knife
-
- T**
- Takahashi nasal forceps, 165–166, 165f
 description of, 165
 insight on, 165
 uses of, 165
- Tamp. *See* Bone tamp
- TA stapler. *See* Linear stapler
- Taylor dural scissors, 262, 262f
 description of, 262
 other names for, 262
 uses of, 262
- Taylor hip retractor, 243–244, 243f
 description of, 243
 insight on, 243
 uses of, 243
- Taylor spinal retractor, 288, 288f
 description of, 288
 uses of, 288
- T-bar Potts elevators. *See* Potts elevator
- Teardrop suction tip, 289, 289f
 description of, 289
 insight on, 289
 other names for, 289
 uses of, 289
- Telescope bridge, 103, 103f
 description of, 103
 insight on, 103
 other names for, 103
 uses of, 103
- Tenaculums, double-tooth. *See* Schroeder uterine vulsellum
- 10-mm 30° endoscope, 72, 72f
 description of, 72
 insight on, 72
- 10-mm 30° endoscope (*Continued*)
 other names for, 72
 uses of, 72
- 10-mm 0° endoscope, 71–72, 71f
 description of, 71
 insight on, 71
 other names for, 71
 uses of, 71
- Tentomy. *See* Jamison scissors
- 30° endoscope. *See* 30° telescope
- 35 clamp. *See* DeBakey peripheral vascular clamp
- 30° lens. *See* 30° telescope
- 30° telescope, 117, 117f
 cautions when using, 117–118
 description of, 117
 insight on, 117
 other names for, 117
 uses of, 117
- Thomas-Gaylor uterine biopsy forceps, 86, 86f
 description of, 86
 other names for, 86
 uses of, 86
- Thomas uterine curette, 83–84, 83f
 description of, 83
 other names for, 83
 uses of, 83
- Thoracoport. *See* Endopath thoracic trocar
- Threaded pins. *See* Steinman pins, threaded
- Thyroid retractor. *See* Green retractor
- Tissue forceps
 with teeth (*See* Toothed tissue forceps)
 without teeth (*See* Plain tissue forceps)
- Tissue scissors. *See* Kelly scissors; Metzenbaum scissors, curved
- Titaniums. *See* DeBakey-Diethrich tissue forceps
- Tongs. *See* Simpson obstetrical forceps
- Tongue blade. *See* Andrew's tongue depressor
- Tongue depressor. *See* Wieder tongue blade
- Tonometer, 119–120, 119f
 description of, 119
 other names for, 119
 uses of, 119
- Tonsil forceps. *See* Allis forceps, curved
- Tonsil grasper. *See* Allis forceps, curved
- Tonsil Schnidt forceps. *See* Adson forceps
- Tonsil scissors. *See* Boettcher tonsil scissors
- Tonsil snare, 169, 169f
 description of, 169
 insight on, 169
 uses of, 169
- Tonsil suction tip. *See* Yankauer suction tip
- Toomey syringe, 115, 115f
 description of, 115
 insight on, 115
 uses of, 115
- Toothed grasper. *See* Cobra grasper

Toothed tissue forceps, 20, 20f
 description of, 20
 insight on, 20
 other names for, 20
 uses of, 20

Total hip instruments, 256, 256f
 description of, 256
 insight on, 256
 other names for, 256
 uses of, 256

Total knee instruments, 253–256, 253f
 description of, 253
 insight on, 253
 other names for, 253
 uses of, 253

Towel clip (nonpenetrating), 23, 23f
 caution when using, 23
 description of, 23
 other names for, 23
 uses of, 23

Towel clip (penetrating), 22, 22f
 cautions when using, 22–23
 description of, 22
 insight on, 22
 other names for, 22
 uses of, 22

Townley caliper, 212–213, 212f
 description of, 212
 other names for, 212
 uses of, 212

TPS system. *See* Stryker core system

Tracheal spreader. *See* Trousseau tracheal dilator

Trach hook. *See* Hupp tracheal hook

Triangle forceps. *See* Pennington forceps

Trousseau tracheal dilator, 182, 182f
 description of, 182
 other names for, 182
 uses of, 182

Tube clamp. *See* Vorse tubing occluding clamp

Turbinate scissors. *See* Cottle angular scissors

25° 4-MM lens, 248, 248f
 description of, 248
 insight on, 248
 other names for, 248
 uses of, 248

Tympanostomy knife. *See* Myringotomy knife

U

Ultrasonic scalpel. *See* Endo harmonic scalpel; Harmonic scalpel

U.S. retractor. *See* Army-Navy retractor

Universal screwdriver set, 218, 218f
 description of, 218
 insight on, 218
 other names for, 218
 uses of, 218

University of Minnesota retractor. *See* Minnesota cheek retractor

Up-biter. *See* Kerrison rongeur

Upper anterior extraction forceps (150), 193–194, 193f
 description of, 193
 insight on, 193
 other names for, 193
 uses of, 193

Ureter clamp. *See* Mixter forceps

Urethral dilators. *See* Van Buren urethral sounds; Walther female urethral sounds

Uterine dilators. *See* Hank dilators; Hegar dilators; Pratt uterine dilators

Uterine manipulator. *See* Hulka tenaculum

Uterine scissors. *See* Mayo uterine scissors

Utility scissors, 222–223, 222f
 description of, 222
 insight on, 222
 other names for, 222
 uses of, 222

V

Van Buren. *See* Van Buren urethral sounds

Van Buren urethral sounds, 112, 112f
 description of, 112
 insight on, 112
 other names for, 112
 uses of, 112

Vannas. *See* Vannas capsulotomy scissors

Vannas capsulotomy scissors, 128, 128f
 description of, 128
 other names for, 128
 uses of, 128

Vascular suction tip, 320, 320f
 description of, 320
 insight on, 320
 other names for, 320
 uses of, 320

Verres needle, 54, 54f
 description of, 54
 insight on, 54
 other names for, 54
 uses of, 54

Versa port trocars, 59–60, 59f
 description of, 59
 insight on, 59
 uses of, 59

Versa step trocars, 65, 65f
 description of, 65
 insight on, 65
 uses of, 65

Vienna nasal speculum, 176, 176f
 description of, 176
 uses of, 176

Visiport, 60, 60f
 description of, 60
 insight on, 60
 other names for, 60
 uses of, 60

Volkman retractor, 27, 27f
 cautions when using, 27–28
 description of, 27
 insight on, 27
 other names for, 27
 uses of, 27

Von Graefe strabismus hook, 136, 136f
 description of, 136
 other names for, 136
 uses of, 136

Vorse tubing occluding clamp, 293, 293f
 description of, 293
 insight on, 293
 other names for, 293
 uses of, 293

Vulsellum. *See* Jacobs vulsellum

W

Walsham septum straightener, 171, 171f
 description of, 171
 insight on, 171
 uses of, 171

Walters forceps. *See* Potts-Smith tissue forceps

Walther female urethral sounds, 111–112, 111f
 description of, 111
 insight on, 111
 other names for, 111
 uses of, 111

Water tubing. *See* Irrigation tubing

Watson skin graft knife, 200, 200f
 description of, 200
 insight on, 200
 other names for, 200
 uses of, 200

Webster needle holder, 209, 209f
 description of, 209
 uses of, 209

Weighted speculum. *See* Auvard weighted vaginal speculum

Weitlaner retractor, 29, 29f
 cautions when using, 29–30
 description of, 29
 insight on, 29
 uses of, 29

Wells enucleation spoon, 121–122, 121f
 description of, 121
 uses of, 121

Wertheim clamp, 108, 108f
 description of, 108
 uses of, 108

Wertheim-Cullen pedicle clamp, 107–108, 107f
 description of, 107
 other names for, 107
 uses of, 107

Westcott tenotomy scissors, 126, 126f
 description of, 126
 uses of, 126

West periosteal, 189, 189f
 description of, 189
 other names for, 189
 uses of, 189

Whisk. *See* Allison lung retractor

Wieder tongue blade, 179, 179f
 description of, 179
 other names for, 179
 uses of, 179

Wiener antrum rasp, 163, 163f
 description of, 163
 other names for, 163
 uses of, 163

Wilde dressing forceps. *See* Wilde tissue forceps

Wilde Ehtmoid forceps, 166, 166f
 description of, 166
 insight on, 166
 uses of, 166

Wilder lacrimal dilator, 133, 133f
 description of, 133
 other names for, 133
 uses of, 133

Wilde rongeur, 266, 266f
 description of, 266
 insight on, 266
 other names for, 266
 uses of, 266

Wilde tissue forceps, 173, 173f
 description of, 173
 other names for, 173
 uses of, 173

Williams eye speculum, 135, 135f
 description of, 135
 uses of, 135

Williams hemilaminectomy retractors, 284, 284f
 description of, 284
 insight on, 284
 other names for, 284
 uses of, 284

Wire cutters. *See* Wire scissors

Wire scissors, 13, 13f
 description of, 13
 insight on, 13
 other names for, 13
 uses of, 13

Wire speculum. *See* Barraquer eye speculum

Woodson dura separator, 279–280, 279f
 description of, 279
 uses of, 279

Woodson elevator, 273–274, 273f
 description of, 273
 uses of, 273

Working element, 104, 104f
 description of, 104
 insight on, 104
 other names for, 104

Wullstein ear forceps, 170–171, 170f
 description of, 170
 other names for, 170
 uses of, 170

X

Xcel blunt port. *See* Blunt trocar

Xcel trocars, 64–65, 64f
 description of, 64
 insight on, 64
 uses of, 64

Y

Yankauer, baby. *See* Andrews-Pynchon suction tip

Yankauer suction tip, 31, 31f
 description of, 31
 insight on, 31
 other names for, 31
 uses of, 31

Yankauer suction tip, nondisposable, 183, 183f
 description of, 183
 insight on, 183
 other names for, 183
 uses of, 183

Yasargil scissors, 304, 304f
 description of, 304
 insight on, 304
 other names for, 304
 uses of, 304

Yasar scissors. *See* Yasargil scissors

Young anterior retractor, 113, 113f
 description of, 113
 other names for, 113
 uses of, 113

Young bifurcated retractor, 114, 114f
 description of, 114
 insight on, 114
 other names for, 114
 uses of, 114

Young bulb retractor, 113–114, 113f
 description of, 113
 insight on, 113
 other names for, 113
 uses of, 113

Young renal clamps, 106–107, 106f
 description of, 106
 uses of, 106

Z

Zaufel-Jansen rongeur, 231, 231f
 description of, 231
 insight on, 231
 other names for, 231
 uses of, 231

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